

Title 33
ENVIRONMENTAL QUALITY

Subpart 3. Louisiana Sewage Sludge and Biosolids Program

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Title 33
ENVIRONMENTAL QUALITY
Part IX. Water Quality

Subpart 3. Louisiana Sewage Sludge and Biosolids Program

**Chapter 73. Standards for the Use or
Disposal of Sewage Sludge and
Biosolids**

**Subchapter A. Program
Requirements**

§7301. General Provisions

A. Purpose and Applicability

1. Purpose

a. This Chapter establishes standards for the use or disposal of sewage sludge generated during the treatment of domestic sewage in a treatment works and of domestic septage (hereafter referred to collectively as *sewage sludge* for the purposes of this Chapter), biosolids, and grease that was pumped or removed from a food service facility and mixed with sewage sludge.

b. The standards established in this Chapter include:

i. general requirements and other requirements for bulk biosolids, general management practices and other management practices for bulk biosolids, pollutant limits, pathogen and vector attraction reduction requirements, and operational standards;

ii. sampling and monitoring requirements, recordkeeping and reporting requirements, specific exclusions, and prohibitions and restrictions regarding the use and disposal of sewage sludge and biosolids;

iii. the siting, operation, and financial assurance requirements for commercial preparers of sewage sludge or land applicers of biosolids; and

iv. requirements and standards for transporters and vehicles utilized for the transporting of sewage sludge.

c. This Chapter establishes requirements for the person who prepares sewage sludge that is disposed in a landfill.

d. In addition, this Chapter contains specific prohibitions and restrictions regarding the use and disposal of sewage sludge and biosolids.

2. Applicability

a. This Chapter applies to any person who:

i. prepares sewage sludge or biosolids, including the dewatering and solidification of sewage sludge;

ii. applies biosolids to the land;

iii. prepares sewage sludge, including the dewatering and solidification of sewage sludge, that is disposed in a landfill;

iv. owns/operates a surface disposal site; and

v. owns/operates a sewage sludge incinerator.

b. This Chapter also applies to:

i. biosolids that are applied to the land and sewage sludge that is disposed at a surface disposal site or at a landfill;

ii. sewage sludge fired in a sewage sludge incinerator, a sewage sludge incinerator and the exit gas from a sewage sludge incinerator, land where biosolids are applied, and a surface disposal site; and

iii. grease that is pumped or removed from a food service facility and is mixed with sewage sludge.

B. General Definitions. The following terms used in this Chapter shall have the meanings listed below, unless the context clearly indicates otherwise, or the term is specifically redefined in a particular Section.

Administrative Authority—the Secretary of the Department of Environmental Quality or his designee or the appropriate assistant secretary or his designee.

Air Operations Area—any area of an airport used or intended to be used for landing, takeoff, or surface maneuvering of aircraft. *Air operations areas* include paved areas or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft, in addition to its associated runways, taxiways, or aprons.

Apply Biosolids or Biosolids Applied to the Land—land application of biosolids.

Base Flood—a flood that has a 1 percent chance of occurring in any given year (i.e., a flood with a magnitude equaled once in 100 years).

Beneficial Use—the use of biosolids for the purpose of soil conditioning or crop or vegetative fertilization in a manner that does not pose a danger of adverse effects upon human health or the environment or cause any deterioration of land surfaces, soils, surface waters, or groundwater.

Biosolids—sewage sludge, or material derived from sewage sludge, that is nonhazardous, has a PCB concentration of less than 50 mg/kg of total solids (dry weight), and is prepared to meet one of the pollutant requirements of LAC 33:IX.7303.E, one of the pathogen

requirements in LAC 33:IX.7309.C, and one of the vector attraction reduction requirements in LAC 33:IX.7309.D.

Bulk Biosolids—biosolids that are not sold or given away in a bag or other container for application to the land.

Class B Biosolids—biosolids that do not meet one or more of the following requirements:

- a. the pollutant concentrations in Table 3 of LAC 33:IX.7303.E;
- b. the pathogen requirements in LAC 33:IX.7309.C.1;
- c. one of the vector attraction reduction requirements in LAC 33:IX.7309.D.2.a-e; and/or
- d. a PCB concentration of less than 10 mg/kg of total solids (dry weight basis).

Class I Sludge Management Facility—for the purposes of this Chapter:

- a. any *publicly owned treatment works (POTW)* or *privately owned sanitary wastewater treatment facility (POSWTF)*, as defined in this Subsection, regardless of its ownership, that is used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage;
- b. any person who prepares sewage sludge or biosolids, including a commercial preparer of sewage sludge and pumper of sewage sludge who prepares sewage sludge or biosolids;
- c. an owner/operator of a sewage sludge incinerator; and
- d. an applier of biosolids to the land, including a commercial land applier of biosolids.

Commercial Land Applier of Biosolids—any person who applies biosolids to the land for monetary profit or other financial consideration and the biosolids were obtained from a facility or facilities not owned by or associated with the person.

Commercial Preparer of Sewage Sludge—any person who prepares sewage sludge for monetary profit or other financial consideration and either the person is not the generator of the sewage sludge or the sewage sludge was obtained from a facility or facilities not owned by or associated with the person.

Container—any stationary or portable device in which sewage sludge or biosolids are stored or transported.

Contaminate an Aquifer—to introduce a substance that causes the maximum contaminant level for nitrate in 40 CFR 141.62(b) to be exceeded in the groundwater, or that causes the existing concentration of nitrate in groundwater to increase when the existing concentration exceeds the maximum contaminant level for nitrate in 40 CFR 141.62(b).

Cover Crop—a small grain crop, such as oats, wheat, or barley, not grown for harvest.

Domestic Septage—liquid or solid material removed from a septic tank, holding tank or similar device, cesspool, portable toilet, Type III marine sanitation device, or similar treatment works that receives only domestic sewage. *Domestic septage* does not include liquid or solid material removed from a septic tank, holding tank or similar device, cesspool, or similar treatment works that receives either commercial wastewater or industrial wastewater, and does not include grease removed from a grease trap at a *food service facility*, as defined in this Subsection.

Domestic Sewage—waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment works.

Dry Weight Basis—calculated on the basis of having been dried at 105°C until reaching a constant mass (i.e., essentially 100 percent solids content).

Exceptional Quality Biosolids—biosolids that are nonhazardous and meet the ceiling concentrations in Table 1 of LAC 33:IX.7303.E, the pollutant concentrations in Table 3 of LAC 33:IX.7303.E, the pathogen requirements in LAC 33:IX.7309.C.1, and one of the vector attraction reduction requirements in LAC 33:IX.7309.D.2.a-e, and that have a PCB concentration of less than 10 mg/kg of total solids (dry weight).

Feed Crop—a crop produced primarily for consumption by animals.

Feedstock—primarily biologically decomposable organic material that is blended, mixed, or composted with sewage sludge.

Fiber Crops—crops such as flax and cotton.

Food Crops—crops consumed by humans. These include, but are not limited to, fruits, vegetables, and tobacco.

Food Service Facility—any facility that prepares and/or packages food or beverages for sale or consumption, on- or off-site, with the exception of private residences. *Food service facilities* include, but are not limited to, food courts, food manufacturers, food packagers, restaurants, grocery stores, bakeries, lounges, hospitals, hotels, nursing homes, churches, schools, and other similar facilities.

Free Air Space, *n*—air-filled pore volume of an as-received compost material. Express *free air space* as a percentage, volume of *free air space* per unit volume of compost (% v v, ± 0.1 %).

Grease—a material, either liquid or solid, composed primarily of fat, oil, or grease from animal or vegetable sources. The terms *fats*, *oils*, and *grease*; *oil and grease*; and *oil and grease substances* shall all be included within this definition.

Groundwater—water below the land surface in the saturated zone.

Industrial Park—an area that is legally zoned for the purpose of the construction and operation of a group of industries and businesses and entered as legally zoned for

such purpose in the public records of the state, parish, city, town, or community where the park is located.

Industrial Wastewater—wastewater generated in a commercial or industrial process.

Institution—the building or buildings that are utilized to house an established organization or foundation, especially one dedicated to public service or to culture. An *institution* includes, but is not limited to, an established school, hospital, business, day-care facility, nursing home, hotel/motel, playground, park, golf course, place of worship, or restaurant/food establishment.

Land Application—the beneficial use of biosolids by either spraying or spreading onto the land surface, injection below the land surface, or incorporation into the soil.

Material Derived from Sewage Sludge—biosolids that are produced when sewage sludge is prepared with other solid waste materials, feedstocks, supplements, and industrial sludges that are approved to be prepared with sewage sludge under these regulations.

Other Container—an open or closed receptacle, including, but not limited to, a bucket, a box, a carton, and a vehicle or trailer with a load capacity of 1 metric ton or less.

Owner or Operator—the owner or operator of any facility or activity subject to these regulations.

Permitting Authority—EPA or a state with an EPA-approved sludge management program.

Person—any individual, municipality, public or private corporation, partnership, firm, the United States Government and any agent or subdivision thereof, or any other juridical person, which shall include, but not be limited to, trusts, joint stock companies, associations, the state of Louisiana, political subdivisions of the state, commissions, and interstate bodies.

Person Who Prepares Sewage Sludge—the person who generates sewage sludge during the treatment of domestic sewage in a treatment works, the person who treats sewage sludge, or the person who derives a material from sewage sludge.

Pollutant—an organic substance, an inorganic substance, a combination of organic and inorganic substances, or a pathogenic organism that, after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism either directly from the environment or indirectly by ingestion through the food chain, could, on the basis of information available to the administrative authority, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction), or physical deformations in either the affected organism or offspring of the organism.

Pollutant Limit—a numerical value that describes the amount of a pollutant allowed per unit amount of sewage sludge (e.g., milligrams per kilogram of total solids); the amount of a pollutant that can be applied to a unit area of land (e.g., kilograms per hectare); or the volume of a

material that can be applied to a unit area of land (e.g., gallons per acre).

Private Land Applier—anyone who applies biosolids to the land for private benefit purposes, where the land application is not for monetary profit or other financial consideration, and either the applier did not generate or prepare the sewage sludge or material derived from sewage sludge, or the facility or facilities from which the biosolids were obtained are not owned by or associated with the *private land applier*.

Privately Owned Sanitary Wastewater Treatment Facility (POSWTF)—a privately owned treatment works that is utilized to treat sanitary wastewater and is not a *publicly owned treatment works (POTW)*, as defined in this Subsection.

Publicly Owned Treatment Works (POTW)—a *treatment works*, as defined by Section 212 of the Clean Water Act, that is owned by a *state* or *municipality*, as defined by Section 502(3) and (4) of the Clean Water Act. This includes all devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. It includes sewers, pipes, and other conveyances only if they convey wastewater to a POTW; and the *municipality*, as defined by Section 502(4) of the Clean Water Act, that has jurisdiction over the indirect discharges to and the discharges from such a treatment works.

Pumper of Sewage Sludge—a person who removes sludge from a sanitary wastewater treatment facility; domestic septage from a residential septic tank, mechanical treatment plant, or dump station for recreational vehicles and watercrafts or vessels; residuals from a portable toilet; or grease from a food service facility that is mixed with sewage sludge.

Qualified Groundwater Scientist—an individual with a baccalaureate or post-graduate degree in the natural sciences or engineering, who has sufficient training and experience in groundwater hydrology, subsurface geology, and/or a related field, as may be demonstrated by state registration, professional certification, or completion of accredited university programs, to make sound professional judgments regarding groundwater monitoring, pollutant fate and transport, and corrective action.

Responsible Official—a person who meets any of the following criteria:

a. for a corporation—a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities;

b. for a partnership or sole proprietorship—a general partner or the proprietor, respectively; or

c. for a municipality or a state, federal, or other public agency—either a principal executive officer or ranking elected official. For the purposes of this Subpart, a principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

Runoff—rainwater, leachate, or other liquid that drains overland on any part of a land surface and runs off of the land surface.

Sewage Sludge—any solid, semisolid, or liquid residue removed during the treatment of municipal wastewater or domestic sewage. *Sewage sludge* includes, but is not limited to, solids removed during primary, secondary, or advanced wastewater treatment, scum, domestic septage, portable toilet pumpings, type III marine sanitation device pumpings (33 CFR Part 159), and sewage sludge products. *Sewage sludge* does not include grit or screenings, or ash generated during the incineration of sewage sludge.

Sludge-Only Facility—any facility whose methods of sewage sludge use or disposal are subject to regulations promulgated in accordance with Section 405(d) of the Clean Water Act, and that is required to obtain a permit under Subsection D of this Section.

Storage Facility—an area of land or constructed facility committed to hold sewage sludge or biosolids until the material may be used or disposed at on- or off-site locations.

Storage of Sewage Sludge or Biosolids—the temporary placement of sewage sludge or biosolids in a container, storage facility, tank, or directly on the land. *Storage of sewage sludge or biosolids* does not pertain to a container or tank that is utilized for the *treatment of sewage sludge*, as defined in this Subsection.

Supplements—materials blended, composted, or mixed with sewage sludge or other feedstock and sewage sludge in order to raise the moisture level and/or adjust the carbon-to-nitrogen ratio, and materials added during composting or to compost to provide attributes required by customers for certain compost products.

Surface Disposal—a use or disposal of sewage sludge on the land that does not meet the criteria of *land application*, as defined in this Subsection.

Tank—a stationary device designed to contain an accumulation of sewage sludge or biosolids that is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic), which provide structural support.

Transporter of Sewage Sludge—a person who pumps or moves sewage sludge off-site by means of land-based vehicles, barges, ships, rails, pipelines, or other modes of transportation. For oxidation ponds/lagoons/surface impoundments, this includes the removal of the sewage sludge from the oxidation ponds/lagoons/surface impoundments to the levees surrounding the oxidation ponds/lagoons/surface impoundments.

Treatment of Sewage Sludge—the preparation of sewage sludge for final use or disposal. This includes, but is not

limited to, blending, mixing, composting, thickening, stabilization, and dewatering and solidification of sewage sludge. This does not include storage of sewage sludge.

Treatment Works—a federally owned, publicly owned, or privately owned device or system used to treat (including recycle and reclaim) either domestic sewage or a combination of domestic sewage and industrial waste of a liquid nature.

TSCA—Toxic Substances Control Act.

C. Compliance Period

1. Compliance with Standards. Except as otherwise specified in this Chapter and in Paragraph C.3 of this Section, compliance with the standards in this Chapter shall be achieved as expeditiously as practicable, but in no case later than February 19, 1994. When compliance with the standards requires construction of new pollution control facilities, compliance with the standards shall be achieved as expeditiously as practicable, but in no case later than February 19, 1995.

2. Frequency of Monitoring, Recordkeeping, and Reporting. The requirements for frequency of monitoring, recordkeeping, and reporting in this Chapter for total hydrocarbons in the exit gas from a sewage sludge incinerator are effective February 19, 1994, or if compliance with the operational standard for total hydrocarbons in this Chapter requires the construction of new pollution control facilities, February 19, 1995. All other requirements for frequency of monitoring, recordkeeping, and reporting in this Chapter are effective on July 20, 1993.

3. Compliance with Requirements

a. Unless otherwise specified in LAC 33:IX.7311, compliance with the requirements in LAC 33:IX.7311.B, beginning with the definition of *average daily concentration* through the definition of *wet scrubber*, LAC 33:IX.7311.D.3, 4, and 5, F.5, 6, 7, 8.d, and 10, G.1.a and c, G.3, and H.2.e shall be achieved as expeditiously as practicable, but in no case later than September 5, 2000. When new pollution control facilities must be constructed to comply with the revised requirements in LAC 33:IX.7311, compliance with the revised requirements shall be achieved as expeditiously as practicable, but no later than September 4, 2001.

b. Compliance with the requirements in Paragraphs G.2, 3, and 4 of this Section shall be achieved as follows.

i. A facility presently meeting all of the requirements for surface disposal in 40 CFR 503, Subpart C, must comply with the requirements in Paragraph G.2 of this Section as expeditiously as practicable, but in no case later than September 1, 2007.

ii. A facility that does not meet all of the requirements for surface disposal in 40 CFR 503, Subpart C, must comply with the requirements in Paragraph G.2 of this Section by December 30, 2005.

iii. All facilities must comply with the requirements in Paragraphs G.3 and 4 of this Section as expeditiously as practicable, but in no case later than September 1, 2007.

D. Permits and Permitting Requirements

1. Except as exempted in Paragraph D.2 of this Section, no person shall prepare sewage sludge or biosolids, dispose of sewage sludge in a permitted landfill, apply biosolids to the land, or own or operate a sewage sludge incinerator without first obtaining a permit in accordance with the deadlines set forth in Subparagraphs D.1.a-c of this Section. The permit shall identify and regulate the specific use or disposal practice, the storage, the treatment, and the appropriate transportation requirements of sewage sludge described in the permit application.

a. As of December 30, 2005, the following permitting requirements apply.

i. Those persons who have been granted an exemption under LAC 33:Part VII for any form of use or disposal of sewage sludge will have 180 days to submit an application for permit coverage under these regulations.

ii. Those persons who have been issued a standard solid waste permit under LAC 33:Part VII for the use, disposal, treatment, or processing of sewage sludge, with the exception of a standard solid waste permit issued for a type of *surface disposal*, as defined in Subsection B of this Section, may continue operations under the standard solid waste permit until such time as a permit has been reissued under these regulations by the administrative authority or for a period not to exceed five years, whichever is less. This time period may be reduced by the administrative authority if deemed necessary for the protection of human health and/or the environment.

iii. Those persons who have been issued a standard solid waste permit for a type of *surface disposal*, as defined in Subsection B of this Section, shall comply with the requirements in Subparagraph C.3.b of this Section.

b. As of June 1, 2006, facilities not addressed under Subparagraph D.1.a of this Section shall apply for a permit as follows.

i. All sanitary wastewater treatment facilities that receive domestic septage and/or portable toilet waste into their systems shall apply for a permit within 180 days of June 1, 2006.

ii. All treatment facilities that are for the sole purpose of preparing sewage sludge or sewage sludge mixed with grease that is pumped or removed from a food service facility shall apply for a permit within 180 days of June 1, 2006.

iii. All treatment facilities that prepare sewage sludge for land application, and all land applicators of biosolids who are not presently operating under an effective standard solid waste permit, shall apply for a permit within 180 days of June 1, 2006.

iv. All major sanitary wastewater treatment facilities that do not receive domestic septage and/or portable toilet waste into their systems shall apply for a permit as expeditiously as practicable, but in no case later than three years from June 1, 2006.

v. All minor sanitary wastewater treatment facilities that do not receive domestic septage and/or portable toilet waste into their systems shall apply for a permit as expeditiously as practicable, but in no case later than five years from June 1, 2006.

c. At least 180 days prior to the expiration of a permit issued under these regulations, the owner/operator of the facility or the land applier shall submit an application for permit issuance under this Chapter if the owner/operator or land applier intends to continue operations after that date.

d. A person who prepares sewage sludge or land-applies biosolids shall use the Sewage Sludge and Biosolids Use or Disposal Permit application form. The owner/operator of a sewage sludge incinerator shall apply for a permit in accordance with LAC 33:III.Chapter 5 and shall utilize both the Air Quality Permit Application and the Sewage Sludge and Biosolids Use or Disposal Permit application forms. The forms can be accessed through the department's website or by contacting the Office of Environmental Services.

e. Except as allowed in this Paragraph, all permits issued in accordance with these regulations shall be effective for a period not to exceed five years. The standard five-year permit period may be reduced to a period of less than five years if deemed necessary by the administrative authority for the protection of human health and/or the environment.

2. Exempt Status for Those Applying Biosolids to the Land

a. A person who applies bagged *biosolids*, as defined in Subsection B of this Section, to the land shall be exempted from obtaining a permit.

b. A person who applies bulk biosolids to the land, if the biosolids were obtained from a facility that is permitted to treat sewage sludge to an Exceptional Quality biosolids level, shall be exempted from obtaining a permit.

c. The administrative authority may exempt any other person who applies biosolids to the land from the requirement of obtaining a permit, on a case-by-case basis, after determining that human health and the environment will not be adversely affected by the application of biosolids to the land.

3. A person who prepares sewage sludge, a person who applies biosolids to the land, and the owner and/or operator of a sewage sludge incinerator who desires to maintain a permit shall obtain adequate training and certification in the processing, treatment, land application, and incineration of sewage sludge.

a. To maintain certification, a minimum of 16 contact hours of continuous education are required for each

certificate held during the previous two-year certification period.

b. Classes, seminars, conferences, or conventions used for units shall be approved by the administrative authority.

4. Closure requirements for sanitary wastewater treatment facilities that were utilized for the preparation of sewage sludge or for sewage sludge disposal ponds/lagoons/surface impoundments that must comply with the requirements of Subparagraph C.3.b of this Section, are as follows.

a. The liquid portion must be removed in a manner that meets the requirements of LAC 33:IX.Chapters 23-71.

b. After removal of the liquid, the sewage sludge shall be used or disposed through one of the options in Clause D.4.b.i or ii of this Section as follows:

i. the submittal of a closure plan to the Office of Environmental Services for the total removal of the sewage sludge and subsequent disposal of the sewage sludge in a permitted landfill. Approval or disapproval of the closure plan shall be rendered by the Office of Environmental Services after receipt and review of the plan. The closure plan shall include the following:

(a). the name, mailing address, physical address, and contact person of the facility that is proposed for closure;

(b). an aerial photograph showing the location of the facility that is proposed for closure;

(c). the approximate amount of sewage sludge that will be removed and disposed at a permitted landfill;

(d). sampling and analysis for the following parameters:

(i). toxicity characteristics leaching procedure (TCLP);

(ii). liquid paint filter test; and

(iii). any other parameter required by the chosen permitted landfill;

(e). either a schematic drawing or an aerial photograph that indicates where the samples for the parameters in Subclause D.4.b.i.(d) of this Section will be taken in the facility;

(f). the laboratory methods to be utilized for the sampling and analysis of the parameters in Subclause D.4.b.i.(d) of this Section;

(g). the name of the laboratory where the samples for the parameters in Subclause D.4.b.i.(d) of this Section will be analyzed;

(h). the name, location, and contact person of the site where the sewage sludge will be disposed; and

(i). any other information the department may require; or

ii. obtaining approval for a permit for the land application of the sewage sludge as a Class B biosolid by submittal of a Sewage Sludge and Biosolids Use or Disposal Permit application to the Office of Environmental Services utilizing the application form that can be accessed on the department's website or by contacting the Office of Environmental Services.

c. Upon completion of the use or disposal option selected in either Clause D.4.b.i or ii of this Section, if the facility is a pond/lagoon/surface impoundment, the levees shall be broken and leveled and the pond/lagoon/surface impoundment shall be filled with soil that includes a minimum of at least 6 inches of topsoil to support vegetative growth.

5. Environmental Impact Supplementary Information. In addition to the requirements of this Chapter, all Sewage Sludge and Biosolids Use or Disposal Permit application forms must include a response to each of the following:

a. a detailed discussion demonstrating that the potential and real adverse environmental effects of the proposed facility have been avoided to the maximum extent possible;

b. a cost-benefit analysis that balances the environmental impact costs against the social and economic benefits of the facility and demonstrates that the latter outweigh the former;

c. a discussion and description of possible alternative projects that would offer more protection to the environment than the proposed facility without unduly curtailing non-environmental benefits;

d. a detailed discussion of possible alternative sites that would offer more protection to the environment than the proposed facility site without unduly curtailing non-environmental benefits; and

e. a discussion and description of mitigating measures that would offer more protection to the environment than the facility as proposed without unduly curtailing non-environmental benefits.

E. Sewage Sludge Disposed in a Landfill

1. A landfill where sewage sludge is disposed must possess a legal and effective permit.

2. A person who disposes of sewage sludge in a landfill shall provide the necessary information to the owner/operator of the landfill where the sewage sludge is to be disposed to assure that the landfill will be in compliance with its permit requirements.

3. The person who prepares sewage sludge that is disposed in a landfill shall provide the following to the Office of Environmental Services on an annual basis on or before February 19 of each year, or at a frequency designated in the permit:

a. proof that the sewage sludge is being disposed at an approved landfill, by furnishing the name, address, and permit number of the landfill; and

b. copies of all records of sampling and laboratory analyses of the sewage sludge for hazardous characteristics or the presence of PCBs, of the results of the Liquid Paint Filter Test (if required in the permit), and of any other analysis required by the owner/operator of the landfill.

F. Registration Requirements and Standards for Transporters of Sewage Sludge Who Are Not Required to Obtain a Permit Under LAC 33:IX.7301.D.1 and Standards for Vehicles Used in the Transport of Sewage Sludge

1. Registration Requirements

a. A transporter of sewage sludge and/or grease mixed with sewage sludge who is not required to obtain a permit under Paragraph D.1 of this Section shall not transport any sewage sludge and/or grease mixed with sewage sludge without first registering such activity with the Office of Environmental Services in writing and paying all associated fees.

b. Registration shall be through a form obtained from the Office of Environmental Services or through the department's website. All the information required by the form shall be provided. The method of payment of fees shall be in accordance with LAC 33:IX.1309.

c. The registration period shall be for one state fiscal year period of July 1 to June 30. All registrations shall expire on June 30 of each year. If a person wishes to continue the operation of transporting sewage sludge, he or she shall apply for re-registration to the Office of Environmental Services at least 60 days prior to June 30 of each year.

d. The fee for registration shall be an annual fee of \$100.

e. The Office of Environmental Services shall be notified prior to any modification to the information submitted for registration, including, but not limited to, the following:

i. the removal and/or addition of information about the facility to which the sewage sludge is being transported; and

ii. the removal and/or addition of a vehicle that will be utilized for the transporting of sewage sludge.

2. Standards for All Transporters of Sewage Sludge

a. All transporters of sewage sludge and/or grease mixed with sewage sludge shall transport the sewage sludge and/or grease mixed with sewage sludge only to a facility permitted to receive sewage sludge or mixtures thereof, and shall maintain a daily log or record of activities containing the following information regarding the sewage sludge and/or grease mixed with sewage sludge:

i. the date the transported material was obtained, pumped, or removed;

ii. the origin or source of the material;

iii. the volume of material generated at each site;

iv. the transfer and/or disposal site; and

v. the total amount of material that was transported or disposed.

b. Standards Applicable to Vehicles Used to Transport Sewage Sludge

i. The bodies of vehicles transporting sewage sludge must be covered at all times, except during loading and unloading, in a manner that prevents rain from reaching the sewage sludge, inhibits access by disease vectors, prevents the sewage sludge from falling or blowing from the vehicle, minimizes escape of odors, and does not create a nuisance.

ii. The bodies of vehicles that are utilized to transport liquefied sewage sludge or a sewage sludge that is capable of producing a leachate shall be constructed and/or enclosed with an appropriate material that will completely prevent the leakage or spillage of the liquid.

iii. The exterior and interior of the body of a vehicle that is transporting sewage sludge shall be washed down, at a designated washdown area, as often as needed to ensure against accumulation of sewage sludge or biosolids, and for the prevention of odors and disease vector attraction.

iv. The vehicle washdown area shall be designed, constructed, and operated to prevent groundwater contamination and stormwater run-on and runoff.

v. All water and leachate generated at the designated washdown area shall be contained and discharged in accordance with all applicable state and federal regulations.

c. Standards for Sewage Sludge Pipelines and Containment Areas

i. Transfer points, pumping stations, and other facilities with a potential for spillage shall be located above grade, or in watertight compartments, and shall be in containment areas constructed to hold the maximum potential spill.

ii. Containment areas shall consist of a base and dikes constructed of concrete, compacted clay, or other impervious materials. All joints must be sealed.

d. Other Standards. The administrative authority may provide appropriate standards for transporters of sewage sludge that utilize modes of transportation not covered by Subparagraphs F.2.b and c of this Section.

e. These regulations do not relieve the transporter from the responsibility of complying with other applicable regulations and licensing requirements, including, but not limited to, those of the Louisiana Department of Transportation and Development, and with applicable ordinances governing types, sizes, and weights of vehicles used to transport sewage sludge on roads and streets that must be traveled during the transporting of the sewage sludge and with any other applicable requirements.

G. Prohibitions, Restrictions, and Additional or More Stringent Requirements

1. Use or Disposal of Sewage Sludge

a. No person shall use or dispose of sewage sludge or biosolids through any practice for which requirements have not been established in this Chapter.

b. No person shall use or dispose of sewage sludge or biosolids except in accordance with the requirements in this Chapter.

2. Surface Disposal Prohibited. *Surface disposal*, as defined in Subsection B of this Section, is prohibited as a use or disposal method of sewage sludge or biosolids.

3. Storage of Sewage Sludge or Biosolids

a. Except as allowed in Subparagraph G.3.b of this Section, the *storage of sewage sludge or biosolids*, as defined in Subsection B of this Section, is allowed for a period not to exceed six consecutive months when:

i. it is necessary for the upgrade, repair, or maintenance of a treatment works or sludge-only facility, or for agricultural storage purposes when the sewage sludge or biosolids are to be used for *beneficial use*, as defined in Subsection B of this Section;

ii. notification has been made by the person who wishes to store the sewage sludge or biosolids to the administrative authority; and

iii. subsequent approval by the administrative authority has been received.

b. An extension for storage for greater than six months may be granted by the administrative authority if storage for the extended period will have no adverse affect on human health or the environment.

c. A request for an extension for storage for greater than six months must be submitted in writing to the Office of Environmental Services at least 60 days prior to the expiration of the first six-month storage period and shall include, but not be limited to, the following information:

i. the name and address of the person who prepared the sewage sludge or biosolids;

ii. the name and address of the person who either owns or leases the land where the sewage sludge or biosolids are to be stored, if different from the person who prepared the sewage sludge;

iii. the location, by either street address or latitude and longitude, of the land;

iv. an explanation of why the sewage sludge or biosolids need to remain on the land;

v. an explanation of why human health and the environment will not be affected;

vi. the approximate date and length of time the sewage sludge or biosolids will be stored on the land; and

vii. the final use and disposal method after the storage period has expired.

d. The administrative authority shall make a determination as to whether or not the information submitted is complete and shall issue the determination within 30 days of having received the request.

i. If the information is deemed incomplete, the administrative authority shall issue a notice of deficiency. The commercial preparer or land applier of sewage sludge shall have 45 days, thereafter, to respond to the notice of deficiency.

ii. If the information is deemed complete, the administrative authority shall make and issue a determination to grant or deny the request for the storage of sewage sludge within 30 days after deeming the information complete.

4. Use of Ponds or Lagoons to Treat Sewage Sludge

a. The use of a pond or lagoon is allowed for the *treatment of sewage sludge*, as defined in Subsection B of this Section, only after a permit has been granted under these regulations and the applicable air and water discharge permits have been applied for and granted by the administrative authority.

b. The person who makes use of a pond or lagoon for the treatment of sewage sludge shall:

i. provide documentation to the Office of Environmental Services that indicates the final use or disposal method for the sewage sludge;

ii. apply for the appropriate permit for the chosen final use or disposal in accordance with this Chapter; and

iii. provide documentation by a qualified groundwater scientist to the Office of Environmental Services that indicates the area where the pond or lagoon is located and if it will adequately protect against potential groundwater contamination either by natural soil conditions or by a constructed soil or synthetic liner that has a hydraulic conductivity of 1×10^{-7} centimeters per second or less, and adequately protect from the potential to *contaminate an aquifer*, as defined in Subsection B of this Section.

5. Solid wastes other than those listed below are prohibited from being prepared with sewage sludge and must be disposed of in the manner provided in LAC 33:VII.Subpart 1:

a. residential and commercial food waste;

b. twigs, branches, leaves, crushed or chipped wood, logs, or trees;

c. wood chips or sawdust;

d. ground or crushed cardboard boxes;

e. paper;

f. fly ash, kiln dust, or other solid waste material that has been approved by the Environmental Protection

Agency for the alkaline treatment/stabilization of sewage sludge; and

g. industrial sludges that are shown to contain only the pollutants that are listed in Table 1 of LAC 33:IX.7303.E and are demonstrated to be of benefit to the soil and/or crops through soil conditioning and/or crop fertilization, or are utilized as a form of alkaline treatment/stabilization of the sewage sludge.

6. Materials prohibited from being prepared with sewage sludge are as follows:

- a. hazardous waste;
- b. materials listed in Table 1 of LAC 33:IX.7301.G; and
- c. other material whose use has a potential to adversely affect human health or the environment, as determined by the administrative authority.

Table 1 of LAC 33:IX.7301.G	
Materials Prohibited from Preparation with Sewage Sludge	
Antifreeze	Pesticides
Automotive (lead-acid) batteries	Photographic supplies
Brake fluid	Propane cylinders
Cleaners (drain, oven, toilet)	Treated wood containing the preservatives CCA and/or PCP
Gasoline and gasoline cans	Tubes and buckets of adhesives, caulking, etc.
Herbicides	Swimming pool chemicals
Household (dry cell) batteries	Unmarked containers
Oil-based paint	Used motor oil

7. A material prepared with sewage sludge must be sampled and analyzed on an annual basis to determine if the material is nonhazardous by a hazardous waste determination in accordance with LAC 33:Part V. Results of the sampling and analysis must be submitted to the administrative authority on an annual basis.

8. Sewage sludge composting operations shall not be located on airport property unless an exemption or approval is granted by the U.S. Department of Transportation's Federal Aviation Administration. If an exemption or approval is granted by the U. S. Department of Transportation's Federal Aviation Administration to allow a sewage sludge composting operation to be located on airport property, the location restrictions in LAC 33:IX.7305.B.1.h and i for off-airport property operations shall apply.

9. The use of raw or untreated sewage sludge as daily, interim, or final cover at a municipal solid waste landfill is prohibited. The use of treated sewage sludge as daily, interim, or final cover at a municipal solid waste landfill is allowed only if the sewage sludge meets the requirements and is used in accordance with the requirements in LAC 33:IX.7303.

10. Except as exempted in LAC 33:IX.7303.M, sewage sludge mixed with grease shall be disposed of in a permitted landfill and shall not be:

- a. introduced into any part of a treatment works, including its collection system; or
- b. applied to the land.

11. On a case-by-case basis, the permitting authority may impose requirements in addition to or more stringent than the requirements in this Chapter when necessary to protect human health and the environment from any adverse effect of a pollutant in the sewage sludge.

H. Exclusions

1. Co-Firing of Sewage Sludge

a. Except for the co-firing of sewage sludge with *auxiliary fuel*, as defined in LAC 33:IX.7311.B, this Chapter does not establish requirements for sewage sludge co-fired in an incinerator with other wastes or for the incinerator in which sewage sludge and other wastes are co-fired.

b. This Chapter does not establish requirements for sewage sludge co-fired with auxiliary fuel if the auxiliary fuel exceeds 30 percent of the dry weight of the sewage sludge and auxiliary fuel mixture.

2. Sludge Generated at an Industrial Facility. This Chapter does not establish requirements for the use or disposal of sludge generated at an industrial facility during the treatment of industrial wastewater, including sewage sludge generated during the treatment of industrial wastewater combined with domestic sewage.

3. Hazardous Sewage Sludge. This Chapter does not establish requirements for the use or disposal of sewage sludge or a material derived from sewage sludge that is hazardous in accordance with LAC 33:Part V.

4. Sewage Sludge Containing PCBs. This Chapter does not establish requirements for the use or disposal of sewage sludge containing polychlorinated biphenyls (PCBs) that are regulated by the TSCA.

5. Incinerator Ash. This Chapter does not establish requirements for the use or disposal of ash generated during the firing of sewage sludge in a sewage sludge incinerator.

6. Grit and Screenings. This Chapter does not establish requirements for the use or disposal of grit (e.g., sand, gravel, cinders, or other materials with a high specific gravity) or screenings (e.g., relatively large materials such as rags) generated during preliminary treatment of domestic sewage in a treatment works.

7. Drinking Water Treatment Sludge. This Chapter does not establish requirements for the use or disposal of sludge generated during the treatment of either surface water or groundwater used for drinking water.

8. Treatment Processes. This Chapter does not establish requirements for processes used to treat *domestic sewage*, as defined in Subsection B of this Section, or for processes used to treat sewage sludge prior to final use or disposal, except as provided in LAC 33:IX.7309.

9. Selection of a Use or Disposal Practice. This Chapter does not require the selection of a sewage sludge

use or disposal practice. The determination of the manner in which sewage sludge is used or disposed is to be made by the person who prepares sewage sludge.

I. Sampling and Analysis

1. Sampling

a. The permittee shall collect and analyze representative samples of sewage sludge or biosolids that are applied to the land and sewage sludge fired in a sewage sludge incinerator at the frequency specified in the permit.

b. The permittee shall create and maintain records of sampling and monitoring information for the period specified in the permit. The sampling and monitoring records shall include:

- i. the date, exact place, and time of sampling or measurements;
- ii. the individual(s) who performed the sampling or measurements;
- iii. the date(s) analyses were performed;
- iv. the individual(s) who performed the analysis;
- v. the analytical techniques or methods used; and
- vi. the results of such analysis.

2. Methods. The materials listed below are incorporated by reference in this Chapter. The materials are incorporated as they exist on the date of approval, and notice of any change in these materials will be published in the *Louisiana Register*. They are available for inspection at the Office of the Federal Register, 7th Floor, Suite 700, 800 North Capitol Street, NW, Washington, DC, and at the Office of Water Docket, Room L-102, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC. Copies may be obtained from the standard producer or publisher listed in the regulation. Information regarding other sources of these documents is available from the Department of Environmental Quality, Office of Environmental Services. Methods in the materials listed below (or in 40 CFR Part 136) shall be used to analyze samples of sewage sludge.

a. Enteric Viruses. ASTM Designation: D 4994-89, "Standard Practice for Recovery of Viruses From Wastewater Sludges," 1992 Annual Book of ASTM Standards: Section 11—Water and Environmental Technology, ASTM, 1916 Race Street, Philadelphia, PA 19103-1187.

b. Fecal Coliform. Part 9221 E, "Standard Methods for the Examination of Water and Wastewater," 18th Edition, 1992, American Public Health Association, 1015 15th Street, NW, Washington, DC 20005; or EPA Method 1680 (<http://www.epa.gov/waterscience/methods/biosolids/EPA.Method.1680.July2006.pdf>) for *Exceptional Quality biosolids* and Part 9221 E or Part 9222 D "Standard Methods for the Examination of Water and Wastewater," 18th Edition, 1992, American Public Health Association, 1015 15th Street, NW, Washington, DC 20005; or EPA Method 1680 or 1681

(<http://www.epa.gov/waterscience/methods/biosolids/EPA.Method.1681.July2006.pdf>) for *Class B Biosolids*.

c. Helminth Ova. Yanko, W.A., "Occurrence of Pathogens in Distribution and Marketing Municipal Sludges," EPA 600/1-87-014, 1987. National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161 (PB 88-154273/AS).

d. Inorganic Pollutants. *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, Second Edition (1982) with Updates I (April 1984) and II (April 1985) and Third Edition (November 1986) with Revision I (December 1987). Second Edition with Updates I and II are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161 (PB-87-120-291). Third Edition with Revision I are available from Superintendent of Documents, Government Printing Office, 941 North Capitol Street, NE, Washington, DC 20002 (Document Number 955-001-00000-1).

e. *Salmonella sp.* Bacteria. Part 9260 D, "Standard Methods for the Examination of Water and Wastewater," 18th Edition, 1992, American Public Health Association, 1015 15th Street, NW, Washington, DC 20005; or EPA Method 1682 (<http://www.epa.gov/waterscience/methods/biosolids/EPA.Method.1682.July2006.pdf>); or Kenner, B.A. and H.P. Clark, "Detection and Enumeration of *Salmonella* and *Pseudomonas Aeruginosa*," *Journal of the Water Pollution Control Federation*, Vol. 46, No. 9, September 1974, pp. 2163-2171. Water Environment Federation, 601 Wythe Street, Alexandria, VA 22314.

f. Specific Oxygen Uptake Rate. Part 2710, B. Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992, American Public Health Association, 1015 15th Street, NW, Washington, DC 20005.

g. Total, Fixed, and Volatile Solids. Part 2540, G. Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992, American Public Health Association, 1015 15th Street, NW, Washington, DC 20005.

h. Incineration of Sewage Sludge—Standards of Performance and Particulate Matter. Materials and Methods at 40 CFR Part 60 as incorporated by reference at LAC 33:III.3003.

i. Incineration of Sewage Sludge—National Emission Standards for Beryllium and for Mercury. Materials, Methods, and Standards at 40 CFR Part 61 as incorporated by reference at LAC 33:III.5116.

j. Composting of Sewage Sludge. *Test Methods for the Examination of Composting and Compost*, The US Composting Council Research and Education Foundation and USDA, TMECC Website: <http://tmecc.org/tmecc/index.html>.

k. Nutrients—*Methods of Soil Analysis*, Soil Science Society of America Series (Most Recent Editions).

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(1)(c) and (B)(3)(e).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:781 (April 2002), repromulgated LR 30:233 (February 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2516 (October 2005), LR 33:2366 (November 2007), repromulgated LR 34:1028 (June 2008), amended LR 35:927 (May 2009).

§7303. Land Application

A. Applicability

1. This Section applies to:
 - a. any person who prepares sewage sludge or biosolids that are applied to the land;
 - b. any person who applies biosolids to the land;
 - c. sewage sludge or biosolids that are applied to the land; and
 - d. the land on which sewage sludge or biosolids are applied.
2. The general requirements in Subsection C of this Section, the other requirements for bulk biosolids in Subsection F of this Section, the general management practices in Subsection D of this Section, and the other management practices for bulk biosolids in Subsection G of this Section do not apply when bulk *Exceptional Quality biosolids*, as defined in LAC 33:IX.7301.B, are applied to the land and the preparer has received and maintained a permit to prepare sewage sludge as Exceptional Quality biosolids in accordance with requirements in Subsection L of this Section.
3. The administrative authority may apply any or all of the general requirements in Subsection C of this Section, the other requirements for bulk biosolids in Subsection F of this Section, the general management practices in Subsection D of this Section, and the other management practices for bulk biosolids in Subsection G of this Section to the bulk biosolids in Paragraph A.2 of this Section on a case-by-case basis after determining that any or all of the requirements or management practices are needed to protect human health and the environment from any reasonably anticipated adverse effect that may occur from the application of the bulk biosolids to the land.
4. The general requirements in Subsection C of this Section and the general management practices in Subsection D of this Section do not apply if the biosolids sold or given away in a bag or other container are *Exceptional Quality biosolids*, as defined in LAC 33:IX.7301.B, and the preparer has received and maintained a permit to prepare sewage sludge as Exceptional Quality biosolids in accordance with the requirements in Subsection L of this Section.
5. The administrative authority may apply any or all of the general requirements in Subsection C of this Section and the general management practices in Subsection D of this Section to the biosolids in Paragraph A.4 of this Section on a case-by-case basis after determining that the requirements or the management practices are needed to protect human health and the environment from any

reasonably anticipated adverse effect that may occur from the application of the biosolids to the land.

B. Special Definitions

Agricultural Land—land on which a food crop, a feed crop, or a fiber crop is grown. This includes range land and land used as pasture.

Agronomic Rate—

- a. the whole biosolids application rate (dry weight basis) designed:
 - i. to provide the amount of nitrogen needed by the food crop, feed crop, fiber crop, cover crop, or vegetation grown on the land; and
 - ii. to minimize the amount of nitrogen in the biosolids that are not utilized by the crop or vegetation grown on the land and either passes below the root zone to the groundwater or gets into surface waters during storm events;
- b. agronomic rate may be extended to include phosphorus to application sites that are located within the drainage basin of water bodies that have been determined by the administrative authority to be impaired by phosphorus.

Annual Pollutant Loading Rate—the maximum amount of a pollutant that can be applied to a unit area of land during a 365-day period.

Annual Whole Biosolids Application Rate—the maximum amount of biosolids (dry weight basis) that can be applied to a unit area of land during a 365-day period.

Cumulative Pollutant Loading Rate—the maximum amount of an inorganic pollutant that can be applied to an area of land.

Forest—a tract of land thick with trees and underbrush.

Monthly Average—the arithmetic mean of all measurements taken during the month.

Pasture—land on which animals feed directly on feed crops such as legumes, grasses, grain stubble, or stover.

Public Contact Site—land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.

Range Land—open land with indigenous vegetation.

Reclamation Site—drastically disturbed land that is reclaimed using biosolids. This includes, but is not limited to, strip mines and construction sites.

C. General Requirements

1. When a person who prepares sewage sludge provides the sewage sludge to another person who prepares the sewage sludge, the person who receives the sewage sludge shall comply with the requirements in this Chapter.

2. The person who provides the sewage sludge shall provide the person who receives the sewage sludge with the following information:

a. the name, mailing address, and location of the facility or facilities of the person providing the sewage sludge;

b. the total dry metric tons being provided per 365-day period; and

c. a description of any treatment processes occurring at the providing facility or facilities, including blending, composting, or mixing activities and the treatment to reduce pathogens and/or vector attraction reduction.

3. No person shall apply biosolids to the land except in accordance with the requirements in this Chapter.

4. Biosolids shall not be applied to the land until the site has been approved by the administrative authority with a finding that the land application site is a legitimate beneficial use site.

D. General Management Practices

1. Land Application Restrictions

a. Biosolids applied to agricultural land, forest, a public contact site, or a reclamation site shall only be applied at a whole biosolids application rate that is equal to or less than the agronomic rate for the biosolids, unless, in the case of a reclamation site, otherwise specified by the permitting authority.

b. Biosolids shall be applied to the land in accordance with the slope requirements in Table 1 of LAC 33:IX.7303.D.

c. Biosolids having a concentration of PCBs equal to or greater than 10 mg/kg of total solids (dry wt.) must be incorporated into the soil regardless of slope.

2. Buffer Zones. When biosolids are applied to agricultural land, forest, or a reclamation site, buffer zones shall be established as follows for each application area, unless otherwise specified by the administrative authority.

a. For all sites, the following buffer zone requirements apply:

i. a private potable water supply well—300 feet, unless special permission is granted by the private potable water supply owner;

ii. a public potable water supply well, surface water intake, treatment plant, or public potable water supply elevated or ground storage tank—300 feet, unless special permission is granted by the Department of Health and Hospitals; and

iii. a property boundary—100 feet, unless special permission is granted by the property owner(s).

b. For new or first-time-permitted sites, the following buffer zone requirements apply:

i. an established *institution*, as defined in LAC 33:IX.7301.B—1,000 feet, unless special permission is granted by the responsible official of the established institution. The permission must be in the form of a notarized affidavit executed by the owner waiving the 1,000-foot buffer zone. However, in no case shall the application area be located less than 200 feet from an institution; and

ii. an occupied residential home or structure—500 feet, unless special permission is granted by the owner and/or lessee of the occupied residential home or structure. The permission must be in the form of a notarized affidavit executed by the owner and/or lessee waiving the 500-foot buffer zone. However, in no case shall land application of sewage sludge be conducted less than 200 feet from the occupied residential home or structure.

3. Water Table Levels. Biosolids shall not be applied to agricultural land, forest, or a reclamation site during the months when the water table is less than or at 2 feet below the soil surface as indicated in the Parish Soil Surveys or the Water Features Data published by the Natural Resources Conservation Service (NRCS); or some form of monitoring device shall be provided to ensure that the annual high water table is greater than 2 feet below the soil surface.

4. Nutrient Management Plan and Soil Sampling. The person who applies biosolids to agricultural or forest land shall:

a. provide proof to the administrative authority that a full nutrient management plan has been developed for the agricultural or forest land where the biosolids are applied. The full nutrient management plan shall be developed by the Natural Resource Conservation Service, a certified soil scientist, a certified crop advisor, or a local LSU Agricultural Center Cooperative Extension Service agent; or

b. sample the soil at the site or sites where biosolids are land-applied on an annual basis, or, if double cropping is practiced, prior to the planting of each crop, for the following parameters:

i. total Kjeldahl nitrogen;

ii. total nitrates;

iii. total nitrites;

iv. total phosphorus;

v. total potassium; and

vi. pH.

5. Biosolids Sold or Given Away in a Bag or Other Container

a. Biosolids sold or given away in a bag or other container shall not be applied to the land at a rate that would cause any of the annual pollutant loading rates in Table 4 of LAC 33:IX.7303.E to be exceeded.

b. The permittee shall either affix a label to the bag or other container holding biosolids that are sold or given away for application to the land, or provide an information sheet to the person who receives biosolids sold or given

away in a bag or other container for application to the land. The label or information sheet shall contain the following information:

i. the information required in Clauses L.1.f.i-ix of this Section, and if the biosolids are compost, the information in Clauses L.1.g.i-vi of this Section; and

ii. the annual whole biosolids application rate that does not cause any of the annual pollutant loading rates in Table 4 of LAC 33:IX.7303.E to be exceeded.

Table 1 of LAC 33:IX.7303.D	
Slope Limitations for Land Application of Biosolids	
Slope Percent	Application Restriction
0-3	None, except drainage to prevent standing water shall be provided.
3-6	A 100-foot vegetated runoff area should be provided at the down slope end of the application area if a liquid is applied. Measures should be taken to prevent erosion.
6-12	Liquid material must be injected into the soil. Solid material must be incorporated into the soil if the site is not covered with vegetation. A 100-foot vegetated runoff area is required at the down slope end of the application area for all applications. Measures must be taken to prevent erosion. Terracing may be required if deemed a necessity by the administrative authority to prevent runoff from the land application site and erosion.
>12	Unsuitable for application unless terraces are constructed and a 200-foot vegetated buffer area with a slope of less than 3 percent is provided at the down slope edge of the application area and the material is incorporated (solid material) and injected (liquid material) into the soil. Measures must be taken to prevent runoff from the land application site and to prevent erosion.

E. Pollutant Limits

1. Sewage Sludge and Biosolids

a. Bulk biosolids or biosolids sold or given away in a bag or other container shall not be applied to the land if the concentration of any pollutant in the biosolids exceeds the ceiling concentration for the pollutant in Table 1 of LAC 33:IX.7303.E.

b. If bulk biosolids are applied to agricultural land, forest, a public contact site, or a reclamation site, either:

i. the cumulative loading rate for each pollutant in the biosolids shall not exceed the cumulative pollutant loading rate for the pollutant in Table 2 of LAC 33:IX.7303.E; or

ii. the concentration of each pollutant in the biosolids shall not exceed the concentration for the pollutant in Table 3 of LAC 33:IX.7303.E.

c. If biosolids are applied to a lawn or a home garden, the concentration of each pollutant in the biosolids shall not exceed the ceiling concentrations in Table 1 of LAC 33:IX.7303.E and the pollutant concentrations for each pollutant listed in Table 3 of LAC 33:IX.7303.E, and the concentration of PCBs must be less than 10 mg/kg of total solids (dry wt.).

d. If biosolids are sold or given away in a bag or other container for application to the land, either:

i. the concentration of each pollutant in the biosolids shall not exceed the ceiling concentration for the pollutant in Table 1 of LAC 33:IX.7303.E and the concentration for the pollutant in Table 3 of LAC 33:IX.7303.E, and the concentration of PCBs must be less than 10 mg/kg of total solids (dry wt.); or

ii. the product of the concentration of each pollutant in the biosolids and the annual whole biosolids application rate for the sewage sludge shall not cause the annual pollutant loading rate for the pollutant in Table 4 of LAC 33:IX.7303.E to be exceeded, and the concentration of PCBs must be less than 10 mg/kg of total solids (dry wt.). The procedure used to determine the annual whole biosolids application rate is presented in LAC 33:IX.7397.Appendix K.

e. The administrative authority may require that the biosolids meet more stringent pollutant limits or limits for additional pollutants than those listed in the Tables of LAC 33:IX.7303.E on a case-by-case basis after determining that the more stringent pollutant limits or limits for additional pollutants are needed to protect human health and the environment from any reasonably anticipated adverse effect that may occur from the application of the biosolids to the land.

2. Pollutant Concentrations and Loading Rates—Biosolids

a. Ceiling Concentrations

Table 1 of LAC 33:IX.7303.E	
Ceiling Concentrations	
Pollutant	Ceiling Concentration (milligrams per kilogram) ¹
Arsenic	75
Cadmium	85
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7500

¹Dry weight basis

b. Cumulative Pollutant Loading Rates

Table 2 of LAC 33:IX.7303.E	
Cumulative Pollutant Loading Rates	
Pollutant	Cumulative Pollutant Loading Rate (kilograms per hectare)
Arsenic	41
Cadmium	39
Copper	1500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2800

c. Pollutant Concentrations

Table 3 of LAC 33:IX.7303.E	
Pollutant Concentrations	

Pollutant	Monthly Average Concentration (milligrams per kilogram) ¹
Arsenic	41
Cadmium	39
Copper	1500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2800

¹Dry weight basis

d. Annual Pollutant Loading Rates

Table 4 of LAC 33:IX.7303.E Annual Pollutant Loading Rates	
Pollutant	Annual Pollutant Loading Rate (kilograms per hectare per 365-day period)
Arsenic	2.0
Cadmium	1.9
Copper	75
Lead	15
Mercury	0.85
Nickel	21
Selenium	5.0
Zinc	140

F. Other Requirements for Bulk Biosolids

1. The person who prepares bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall provide the person who applies the bulk biosolids with written notification of the concentration, on a dry weight basis, of total nitrogen, ammonia (as N), nitrates, potassium, and phosphorus in the bulk biosolids.

2. When a person who prepares bulk sewage sludge provides the bulk biosolids to a person who applies the bulk biosolids to the land, the person who prepares the bulk sewage sludge shall provide the person who applies the bulk biosolids with notice and necessary information to comply with the requirements in this Chapter.

3. The person who applies bulk biosolids to the land shall provide the owner or leaseholder of the land on which the bulk biosolids are applied with notice and necessary information to comply with the requirements in this Chapter.

4. No person shall apply bulk biosolids subject to the cumulative pollutant loading rates in Table 2 of LAC 33:IX.7303.E to the land without first contacting the administrative authority to determine if bulk biosolids subject to the cumulative pollutant loading rates in Table 2 of LAC 33:IX.7303.E have been applied to the land since July 20, 1993.

5. No person shall apply bulk biosolids subject to the cumulative pollutant loading rates in Table 2 of LAC 33:IX.7303.E to agricultural land, forest, a public contact site, or a reclamation site if any of the cumulative pollutant loading rates in Table 2 of LAC 33:IX.7303.E has been reached.

6. If bulk biosolids have not been applied to a site since July 20, 1993, the cumulative amount for each pollutant listed in Table 2 of LAC 33:IX.7303.E may be applied to the site in accordance with Clause E.1.b.i of this Section.

7. If bulk biosolids have been applied to the site since July 20, 1993, and the cumulative amount of each pollutant applied to the site in the bulk biosolids since that date is known, the cumulative amount of each pollutant applied to the site shall be used to determine the additional amount of each pollutant that can be applied to the site in accordance with Clause E.1.b.i of this Section.

8. If bulk biosolids have been applied to the site since July 20, 1993, and the cumulative amount of each pollutant applied to the site in the bulk biosolids since that date is not known, an additional amount of each pollutant shall not be applied to the site in accordance with Clause E.1.b.i of this Section.

G. Other Management Practices for Bulk Biosolids

1. Bulk biosolids shall not be applied to the land if it is likely to adversely affect a threatened or endangered species listed under Section 4 of the Endangered Species Act or its designated critical habitat.

2. Bulk biosolids shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk biosolids enter a *wetland* or other *waters of the state*, as defined in LAC 33:IX.2313, except as provided in a permit issued in accordance with Section 402 or 404 of the CWA or LAC 33:IX.Chapters 23-71.

3. Bulk biosolids shall not be applied to agricultural land, forest, or a reclamation site that is 33 feet (10 meters) or less from any *waters of the state*, as defined in LAC 33:IX.2313, unless otherwise specified by the permitting authority.

4. Bulk biosolids shall not be applied to the land if it would affect a property that either is listed on, or is eligible for listing on, the National Historic Register.

H. Operational Standards—Pathogens and Vector Attraction Reduction

1. Pathogens

a. The Exceptional Quality biosolids pathogen requirements in LAC 33:IX.7309.C.1 or the Class B pathogen requirements and site restrictions in LAC 33:IX.7309.C.2 shall be met when bulk biosolids are applied to agricultural land, forest, a public contact site, or a reclamation site.

b. The Exceptional Quality biosolids pathogen requirements in LAC 33:IX.7309.C.1 shall be met when biosolids are applied to a lawn or a home garden.

c. The Exceptional Quality biosolids pathogen requirements in LAC 33:IX.7309.C.1 shall be met when biosolids are sold or given away in a bag or other container for application to the land.

2. Vector Attraction Reduction

a. One of the vector attraction reduction requirements in LAC 33:IX.7309.D.2.a-g shall be met when bulk biosolids are applied to agricultural land, forest, a public contact site, or a reclamation site.

b. One of the vector attraction reduction requirements in LAC 33:IX.7309.D.2.a-e shall be met when biosolids are applied to a lawn or a home garden.

c. One of the vector attraction reduction requirements in LAC 33:IX.7309.D.2.a-e shall be met when biosolids are sold or given away in a bag or other container for application to the land.

I. Frequency of Monitoring

1. The frequency of monitoring for the pollutants listed in Table 1, Table 2, Table 3, and Table 4 of LAC 33:IX.7303.E; the frequency of monitoring for pathogen density requirements in LAC 33:IX.7309.C.1 and 2.b; and the frequency of monitoring for vector attraction reduction requirements in LAC 33:IX.7309.D.2.a-e shall be the frequency specified in Table 1 of LAC 33:IX.7303.I.

Table 1 of LAC 33:IX.7303.I	
Frequency of Monitoring—Land Application	
Amount of Biosolids ¹ (metric tons per 365-day period)	Frequency
Greater than zero but less than 290	Once per year
Equal to or greater than 290 but less than 1,500	Once per quarter (four times per year)
Equal to or greater than 1,500 but less than 15,000	Once per 60 days (six times per year)
Equal to or greater than 15,000	Once per month (12 times per year)
¹ Either the amount of bulk biosolids applied to the land (on a dry weight basis) or the amount of biosolids that are bagged and sold or given away for application to the land (on a dry weight basis).	

2. After the biosolids have been monitored for two years at the frequency in Table 1 of LAC 33:IX.7303.I, the permitting authority may reduce the frequency of monitoring for pollutant concentrations and for the pathogen density requirements in LAC 33:IX.7309.C.1.e.ii and iii.

J. Recordkeeping

1. All *Class I sludge management facilities*, as defined in LAC 33:IX.7301.B, that prepare sewage sludge shall keep a record of the following for a period of five years:

- annual production of sewage sludge (i.e., dry tons or dry metric tons);
- the sewage sludge management practice used;
- sampling results for hazardous characteristics; and
- sampling results for PCBs.

2. Additional Recordkeeping

a. The recordkeeping requirements for the person who prepares the sewage sludge or biosolids that are land applied and meet the criteria in Paragraphs A.2 and 4 of this Section are those indicated in Paragraph L.9 of this Section.

b. For bulk biosolids that are applied to agricultural land, forest, a public contact site, or a reclamation site and that meet the pollutant concentrations in Table 3 of LAC 33:IX.7303.E, the Exceptional Quality biosolids pathogen requirements in LAC 33:IX.7309.C.1, and the vector attraction reduction requirements in either LAC 33:IX.7309.D.2.f or g:

i. the person who prepares the bulk biosolids shall develop the following information and shall retain the information for five years:

(a). the concentration of each pollutant listed in Table 3 of LAC 33:IX.7303.E;

(b). a description of how the Exceptional Quality biosolids pathogen requirements in LAC 33:IX.7309.C.1 are met; and

(c). the following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the Exceptional Quality biosolids pathogen requirements in LAC 33:IX.7309.C.1 was prepared under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."; and

ii. the person who applies the bulk biosolids to the land shall develop the following information and shall retain the information for five years:

(a). a description of how the general management practices in Paragraphs D.1-4 of this Section and the other management practices for bulk biosolids in Subsection G of this Section are met for each site on which bulk biosolids are applied;

(b). a description of how the vector attraction reduction requirements in either LAC 33:IX.7309.D.2.f or g are met for each site on which bulk biosolids are applied; and

(c). the following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the general management practices in LAC 33:IX.7303.D.1-4, the other management practices for bulk biosolids in LAC 33:IX.7303.G, and the vector attraction reduction requirement in [insert either LAC 33:IX.7309.D.2.f or g] was prepared under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

c. For bulk biosolids that are applied to agricultural land, forest, a public contact site, or a reclamation site and that meet the pollutant concentrations in Table 3 of LAC 33:IX.7303.E, the Class B pathogen requirements in

LAC 33:IX.7309.C.2, and the vector attraction reduction requirements in LAC 33:IX.7309.D.2.a-g:

i. the person who prepares the bulk biosolids shall develop the following information and shall retain the information for five years:

(a). the concentration of each pollutant listed in Table 3 of LAC 33:IX.7303.E;

(b). a description of how the Class B pathogen requirements in LAC 33:IX.7309.C.2 are met;

(c). a description of how one of the vector attraction reduction requirements in LAC 33:IX.7309.D.2.a-g is met; and

(d). the following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the Class B pathogen requirements in LAC 33:IX.7309.C.2 and the vector attraction reduction requirement in [insert one of the vector attraction reduction requirements in LAC 33:IX.7309.D.2.a-g] was prepared under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."; and

ii. the person who applies the bulk biosolids to the land shall develop the following information and shall retain the information for five years:

(a). a description of how the general management practices in Paragraphs D.1-4 of this Section and the other management practices for bulk biosolids in Subsection G of this Section are met for each land site on which bulk biosolids are applied;

(b). a description of how the site restrictions in LAC 33:IX.7309.C.2.e are met for each land site on which bulk biosolids are applied;

(c). when the vector attraction reduction requirement in either LAC 33:IX.7309.D.2.f or g is met, a description of how the requirement is met;

(d). the date bulk biosolids are applied to each site; and

(e). the following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the general management practices in LAC 33:IX.7303.D.1-4, the other management practices for bulk biosolids in LAC 33:IX.7303.G, the site restrictions in LAC 33:IX.7309.C.2.e, and the vector attraction reduction requirement in [insert either LAC 33:IX.7309.D.2.f or g] was prepared for each site on which bulk biosolids are applied under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

d. For bulk biosolids applied to the land that is agricultural land, forest, a public contact site, or a reclamation site whose cumulative loading rate for each pollutant does not exceed the cumulative pollutant loading rate for each pollutant in Table 2 of LAC 33:IX.7303.E and that meet the Exceptional Quality biosolids or Class B pathogen requirements in LAC 33:IX.7309.C, and the vector attraction reduction requirements in LAC 33:IX.7309.D.2.a-g:

i. the person who prepares the bulk biosolids shall develop the following information and shall retain the information for five years:

(a). the concentration of each pollutant listed in Table 1 of LAC 33:IX.7303.E in the bulk biosolids;

(b). a description of how the Exceptional Quality biosolids or Class B pathogen requirements in LAC 33:IX.7309.C are met;

(c). a description of how one of the vector attraction reduction requirements in LAC 33:IX.7309.D.2.a-g is met; and

(d). the following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the pathogen requirements in [insert either LAC 33:IX.7309.C.1 or 2] and the vector attraction reduction requirement in [insert one of the vector attraction reduction requirements in LAC 33:IX.7309.D.2.a-g] was prepared under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."; and

ii. the person who applies the bulk biosolids to the land shall develop the following information, retain the information in Subclauses J.2.d.ii.(a)-(g) of this Section indefinitely, and retain the information in Subclauses J.2.d.ii.(h)-(m) of this Section for five years:

(a). the location, by either street address or latitude and longitude, of each land site on which bulk biosolids are applied;

(b). the number of hectares or acres in each site on which bulk biosolids are applied;

(c). the date bulk biosolids are applied to each land site;

(d). the cumulative amount of each pollutant (i.e., kilograms) listed in Table 2 of LAC 33:IX.7303.E in the bulk biosolids applied to each land site, including the amount in Paragraph F.7 of this Section;

(e). the amount of biosolids (i.e., tons or metric tons) applied to each land site;

(f). a description of how the information was obtained in order to comply with Subsection F of this Section;

(g). the following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the requirements in LAC 33:IX.7303.F was prepared for each land site on which bulk biosolids were applied under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.";

(h). a description of how the general management practices in Paragraphs D.1-4 of this Section and the other management practices for bulk biosolids in Subsection G of this Section are met for each land site on which bulk biosolids are applied;

(i). the following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the general management practices in LAC 33:IX.7303.D.1-4 and the other management practices for bulk biosolids in LAC 33:IX.7303.G was prepared for each land site on which bulk biosolids were applied under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.";

(j). a description of how the site restrictions in LAC 33:IX.7309.C.2.e are met for each land site on which Class B bulk biosolids are applied;

(k). the following certification statement when the bulk biosolids meet the Class B pathogen requirements in LAC 33:IX.7309.C.2:

"I certify, under penalty of law, that the information that will be used to determine compliance with the site restrictions in LAC 33:IX.7309.C.2.e for each land site on which Class B biosolids were applied was prepared under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.";

(l). if the vector attraction reduction requirements in either LAC 33:IX.7309.D.2.f or g are met, a description of how the requirements are met; and

(m). the following certification statement when the vector attraction reduction requirement in either LAC 33:IX.7309.D.2.f or g is met:

"I certify, under penalty of law, that the information that will be used to determine compliance with the vector attraction reduction requirement in [insert either LAC 33:IX.7309.D.2.f or g] was prepared under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.";

significant penalties for false certification including the possibility of fine and imprisonment."

e. For biosolids sold or given away in a bag or other container for application to the land meeting the requirement at Clause E.1.d.ii of this Section, the Exceptional Quality biosolids pathogen requirements at LAC 33:IX.7309.C.1, and the vector attraction reduction requirements in LAC 33:IX.7309.D.2.a-e:

i. the person who prepares the biosolids that are sold or given away in a bag or other container shall develop the following information and shall retain the information for five years:

(a). the annual whole biosolids application rate for the biosolids that does not cause the annual pollutant loading rates in Table 4 of LAC 33:IX.7303.E to be exceeded;

(b). the concentration of each pollutant listed in Table 4 of LAC 33:IX.7303.E in the biosolids;

(c). a description of how the Exceptional Quality biosolids pathogen requirements in LAC 33:IX.7309.C.1 are met;

(d). a description of how one of the vector attraction reduction requirements in LAC 33:IX.7309.D.2.a-e is met;

(e). a description of how the general management practice in Subparagraph D.5.b of this Section was met; and

(f). the following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the general management practice in LAC 33:IX.7303.D.5.b, the Exceptional Quality biosolids pathogen requirements in LAC 33:IX.7309.C.1, and the vector attraction reduction requirement in [insert one of the vector attraction reduction requirements in LAC 33:IX.7309.D.2.a-e] was prepared under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.";

ii. the person who applies the biosolids that are given away or sold in a bag or other container to the land that is agricultural land, forest, a public contact site, or a reclamation area shall develop the following information and shall retain the information for five years:

(a). a description of how the general management practices in Paragraphs D.1-4 and Subparagraph D.5.a of this Section are met for each site on which the biosolids given away or sold in a bag or other container are applied; and

(b). the following certification statement:

"I certify, under penalty of law, that the information that will be used to determine

compliance with the general management practices in LAC 33:IX.7303.D.1-4 and D.5.a was prepared for each site on which biosolids given away or sold in a bag or other container are applied under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including fine and imprisonment."

K. Reporting

1. All *Class I sludge management facilities*, as defined in LAC 33:IX.7301.B, that prepare sewage sludge shall submit the information in Paragraph J.1 of this Section to the administrative authority on or before February 19 of each year.

2. Additional Reporting Requirements

a. Reporting requirements for a person who prepares *Exceptional Quality biosolids*, as defined in LAC 33:IX.7301.B, from sewage sludge, having a permit to do so, are as indicated in Paragraph L.10 of this Section.

b. All other *Class I sludge management facilities*, as defined in LAC 33:IX.7301.B, that apply bulk biosolids to the land and are required to obtain a permit under LAC 33:IX.7301.D, shall submit the information in Paragraph J.2 of this Section, for the appropriate requirements, to the administrative authority as follows.

i. For facilities having a frequency of monitoring in Table 1 of LAC 33:IX.7303.I of once per year, the reporting period and the report due date shall be as specified in Table 1 of LAC 33:IX.7303.K.

Table 1 of LAC 33:IX.7303.K	
Reporting—Land Application	
Monitoring Period ¹ (Once per Year)	Report Due Date
January - December	February 28

ii. For facilities having a frequency of monitoring in Table 1 of LAC 33:IX.7303.I of once per quarter (four times per year), the reporting period and the report due date shall be as specified in Table 2 of LAC 33:IX.7303.K.

Table 2 of LAC 33:IX.7303.K	
Reporting—Land Application	
Monitoring Period ¹ (Once per Quarter)	Report Due Date
January, February, March	August 28
April, May, June	
July, August, September	February 28
October, November, December	
¹ Separate reports must be submitted for each monitoring period.	

iii. For facilities having a frequency of monitoring in Table 1 of LAC 33:IX.7303.I of once per 60 days (six times per year), the reporting period and the report due date shall be as specified in Table 3 of LAC 33:IX.7303.K.

Table 3 of LAC 33:IX.7303.K	
Reporting—Land Application	

Monitoring Period ¹ (Once per 60 Days)	Report Due Date
January, February	June 28
March, April	
May, June	October 28
July, August	
September, October	February 28
November, December	
¹ Separate reports must be submitted for each monitoring period.	

iv. For facilities having a frequency of monitoring in Table 1 of LAC 33:IX.7303.I of once per month (12 times per year), the reporting period and the report due date shall be as specified in Table 4 of LAC 33:IX.7303.K.

Table 4 of LAC 33:IX.7303.K	
Reporting—Land Application	
Monitoring Period ¹ (Once per Month)	Report Due Date
January	May 28
February	
March	
April	August 28
May	
June	
July	November 28
August	
September	
October	February 28
November	
December	
¹ Separate reports must be submitted for each monitoring period.	

3. The administrative authority may require any facility indicated in Subparagraph K.2.a of this Section to report any or all of the information required in Subparagraph K.2.b of this Section if deemed necessary for the protection of human health or the environment.

L. Requirements for Persons Who Prepare Sewage Sludge as Exceptional Quality Biosolids

1. A person who prepares sewage sludge as Exceptional Quality biosolids must prepare the sewage sludge in a manner that will assure that the sewage sludge meets all of the requirements of *Exceptional Quality biosolids*, as defined in LAC 33:IX.7301.B, and shall forward to the administrative authority a Sewage Sludge and Biosolids Use or Disposal Permit application form having the following information:

a. the laboratory analysis of the metals in Tables 1 and 3 of LAC 33:IX.7303.E;

b. the laboratory analysis for percent dry solids, percent ammonia nitrogen, percent nitrate, percent nitrite, percent nitrogen, percent phosphorus, percent potassium, and percent organic matter and, if the sewage sludge or biosolids underwent or were subjected to any type of alkaline stabilization and/or alkaline treatment, the pH of the sewage sludge or biosolids;

c. the laboratory results for polychlorinated biphenyls (PCBs);

d. the Exceptional Quality biosolids pathogen requirement in LAC 33:IX.7309.C.1 that will be utilized;

e. the vector attraction reduction requirement in LAC 33:IX.7309.D.2.a-e that will be utilized;

f. an example of the label or information sheet that will accompany biosolids that are sold or given away either in bulk or in a bag, containing the following information:

- i. the name and address of the preparer;
- ii. the concentration (by volume) of each metal in Table 3 of LAC 33:IX.7303.E;
- iii. percent nitrogen;
- iv. percent ammonia nitrogen;
- v. percent phosphorus;
- vi. percent potassium;
- vii. pH;
- viii. the concentration of PCBs in mg/kg of total solids (dry wt.); and

ix. application instructions and a statement that application of the biosolids to the land is prohibited except in accordance with the instructions on the label or information sheet; and

g. in addition to the label requirements in Clauses L.1.f.i-ix of this Section, an example of the label that must accompany all compost sold or given away either in bulk or in a bag or other container, having the following information:

- i. soluble salt content;
- ii. water holding capacity;
- iii. bulk density (lbs/yd³);
- iv. particle size;
- v. moisture content; and
- vi. percent organic matter content.

2. The administrative authority may require that the biosolids meet more stringent pollutant limits, or limits for additional pollutants than those listed in Subparagraphs L.1.a-e of this Section, on a case-by-case basis after determining that the more stringent pollutant limits or limits for additional pollutants are needed to protect human health and the environment from any reasonably-anticipated adverse effect that may occur from the application of the biosolids to the land.

3. Samples required to be collected in accordance with Subparagraphs L.1.a-c of this Section shall be from at least four representative samplings of the biosolids taken at least 60 days apart within the 12 months prior to the date of the submittal of the Sewage Sludge and Biosolids Use or Disposal Permit application form.

4. All permits issued to persons who prepare sewage sludge as Exceptional Quality biosolids shall have a term of not more than five years.

5. For the term of the permit, the preparer of the biosolids shall conduct continued sampling at a frequency of monitoring indicated in Table 1 of LAC 33:IX.7303.L. The samples shall be analyzed for the parameters specified in Subparagraphs L.1.a-c of this Section, and for the pathogen and vector attraction reduction requirements in Subparagraphs L.1.d and e of this Section, as required by LAC 33:IX.7309.

Table 1 of LAC 33:IX.7303.L	
Frequency of Monitoring—Exceptional Quality Biosolids	
Amount of Biosolids ¹ (metric tons per 365-day period)	Frequency
Greater than zero but less than 15,000	Once per quarter (four times per year)
Equal to or greater than 15,000	Once per month (12 times per year)
¹ The amount of biosolids sold or given away either in bulk or in a bag or other container.	

6. If results of the sampling indicate that the biosolids are no longer *Exceptional Quality biosolids*, as defined in LAC 33:IX.7301.B, then the preparer must cease any land application of the biosolids as Exceptional Quality biosolids.

7. If biosolids that are no longer Exceptional Quality biosolids are used or disposed, the exemption for Exceptional Quality biosolids no longer applies, and the biosolids must meet all the requirements and restrictions of this Chapter that apply to biosolids that are no longer Exceptional Quality biosolids.

8. Biosolids shall not be applied to the land as Exceptional Quality biosolids until the sample analyses have shown that the biosolids meet the criteria for *Exceptional Quality biosolids*, as defined in LAC 33:IX.7301.B.

9. The person who prepares the biosolids shall develop the following information and shall retain the information for five years:

- a. the results of the sample analysis required in Paragraph L.5 of this Section; and
- b. the following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the Exceptional Quality biosolids pathogen requirements in LAC 33:IX.7309.C.1 and the vector attraction reduction requirement in [insert one of the vector attraction reduction requirements in LAC 33:IX.7309.D.2.a-e] was prepared under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

10. The person who prepares Exceptional Quality biosolids shall forward the information required in

Paragraph L.9 of this Section to the administrative authority as follows.

a. For facilities having a frequency of monitoring in Table 1 of LAC 33:IX.7303.L of once per quarter (four times per year), the reporting periods and the report due dates shall be as specified in Table 2 of LAC 33:IX.7303.L.

Table 2 of LAC 33:IX.7303.L	
Reporting—Exceptional Quality Biosolids	
Monitoring Period ¹ (Once per Quarter)	Report Due Date
January, February, March	August 28
April, May, June	
July, August, September	February 28
October, November, December	
¹ Separate reports must be submitted for each monitoring period.	

b. For facilities having a frequency of monitoring in Table 1 of LAC 33:IX.7303.L of once per month (12 times per year), the reporting periods and the report due dates shall be as specified in Table 3 of LAC 33:IX.7303.L.

Table 3 of LAC 33:IX.7303.L	
Reporting—Exceptional Quality Biosolids	
Monitoring Period ¹ (Once per Month)	Report Due Date
January	May 28
February	
March	
April	August 28
May	
June	
July	November 28
August	
September	
October	February 28
November	
December	
¹ Separate reports must be submitted for each monitoring period.	

M. Any person subject to these regulations who prepares sewage sludge may petition the administrative authority to allow the land application of sewage sludge that is mixed with grease that was pumped or removed from a food service facility.

1. The administrative authority may grant temporary approval, for a period not to exceed one year, for the land application of sewage sludge that is mixed with grease that was pumped or removed from a food service facility, along with the appropriate monitoring, sampling and analysis, recordkeeping, and reporting requirements, when petitions for such are deemed appropriate after consideration of the factors enumerated in Paragraph M.2 of this Section as well as any other pertinent factors.

2. Each petition for the allowance of land application of sewage sludge that is mixed with grease that was pumped or removed from a food service facility shall:

a. be submitted in writing to the administrative authority;

b. be accompanied by evidence of public notice in the state journal and in the local journal; and

c. contain the following information:

i. documentation to prove that the preparation or treatment process will be the composting process to further reduce pathogens described in LAC 33:IX.7399.Appendix L;

ii. documentation to prove that the facility owner/operator has successfully completed a department-approved composting facility operator training course; and

iii. documentation to satisfy the requirements in Subsection L of this Section and LAC 33:IX.7305 and 7307.

3. If the owner/operator wishes to continue operation of the compost facility, he or she shall submit to the administrative authority a completed Sewage Sludge and Biosolids Use or Disposal Permit application form at least 180 days prior to the expiration date of the approval. The decision to grant or deny a permit for continuation of the compost operation shall be based on the information provided in the permit application, the monitoring and sampling and analysis results submitted during the one-year approval period, and any comments or other information received during the standard permit public notice period.

N. Procedure for the Addition or Removal of Land Application Sites

1. If a person who possesses a Sewage Sludge and Biosolids Use or Disposal Permit wishes to add a land application site or sites to the permit, the person shall submit a request package to the administrative authority containing the following information:

a. evidence of notification of the landowners bordering the proposed land application site or sites. The notification shall be in the form of a public notice placed in the local newspaper being circulated in the area of the proposed site or sites, certified letters of notification that were either hand delivered or mailed to the landowners bordering the proposed site or sites, or signed agreements of the landowners bordering the proposed site or sites to application of biosolids to the site or sites;

b. signed agreement(s) to the application of biosolids from the landowner(s) of the proposed site or sites; and

c. a completed Sewage Sludge and Biosolids Use or Disposal Permit application form.

2. If a person who possesses a Sewage Sludge and Biosolids Use or Disposal Permit wishes to remove a land application site or sites from the permit, the person shall submit a request package to the administrative authority at least 90 days prior to the removal of the site or sites containing the following information:

a. aerial photographs showing the location of the land application site or sites that are being proposed to be removed;

b. certification that all biosolids that were stored at the site or sites have either been land applied in accordance with the permit requirements or totally removed and used at

another site in accordance with the permit requirements or removed and disposed at a permitted landfill; and

c. signed agreements from the landowner(s) of the site or sites for the site or sites to be removed from the land application of biosolids.

3. After receipt and review of the request package required in Paragraph N.1 of this Section for the addition of a land application site or sites or the request package required in Paragraph N.2 of this Section for the removal of a land application site or sites, a decision shall be rendered by the administrative authority regarding the request.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(1)(c) and (B)(3)(e).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:785 (April 2002), repromulgated LR 30:233 (February 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2374 (November 2007), LR 35:929 (May 2009).

§7305. Siting and Operation Requirements for Commercial Preparers of Sewage Sludge

A. Exemption. A *publicly owned treatment works (POTW)*, as defined in LAC 33:IX.7301.B, shall be exempted from the siting requirements in Subsection B of this Section and the facility closure requirements in Paragraph C.3 of this Section if the POTW prepares only sewage sludge generated at the POTW or sewage sludge generated at a facility that is owned or operated by the POTW and the POTW's sewage sludge treatment facility is located within the POTW's boundary or perimeter.

B. Siting

1. Location Characteristics

a. Facilities shall not be located less than 200 feet from a property line. A reduction in this requirement shall be allowed only with the permission, in the form of a notarized affidavit, of the adjoining landowners and occupants. A copy of the notarized affidavit waiving the 200-foot buffer zone shall be entered in the mortgage and conveyance records of the parish for the adjoining landowner's property.

b. Facilities shall not be located less than 300 feet from a private potable water supply or a private water supply elevated storage tank or ground storage tank unless special permission is granted by the private potable water supply owner.

c. Facilities shall not be located less than 300 feet from a public potable water supply or a public water supply elevated storage tank or ground storage tank unless special permission is granted by the Department of Health and Hospitals.

d. Facilities shall not be located less than 100 feet from wetlands, surface waters (streams, ponds, lakes), or areas historically subject to overflow from floods.

e. Facilities shall only be located in a hydrologic section where the historic high water table is at a minimum of a 3-foot depth below the surface, or the water table at the

facility shall be controlled to a minimum of a 3-foot depth below this zone.

f. Untreated sewage sludge, other materials, feedstock, or supplements to be utilized at a facility shall not be located less than 25 feet from a subsurface drainage pipe or drainage ditch that discharges directly to waters of the state.

g. New or first-time-permitted facilities that are not located within the boundaries of a legally zoned and established industrial park:

i. shall not be located less than 1,000 feet from an established institution, as defined in LAC 33:IX.7301.B, unless special permission is granted by the owner of the institution. The permission must be in the form of an affidavit executed by the owner waiving the 1,000-foot buffer zone. However, in no case shall the facility be located less than 200 feet from such an institution; and

ii. shall not be located less than 500 feet from an established home residence unless special permission has been granted by the owner and/or lessee of the established home residence in the form of an affidavit executed by the owner and/or lessee waiving the 500-foot buffer zone. However, in no case shall the facility be located less than 200 feet from an established home residence.

h. Facilities that prepare or compost only sewage sludge or blend, mix, or compost sewage sludge and have only woodchips or yard waste (e.g., leaves, lawn clippings, or branches) as feedstock or supplements shall not be located closer than the greater of the following distances from an airport:

i. 1,200 feet from the *air operations area*, as defined in LAC 33:IX.7301.B; or

ii. the distance called for by the U.S. Department of Transportation Federal Aviation Administration's airport design requirements.

i. Facilities that blend, mix, or compost sewage sludge that include food or other municipal solid waste as feedstock or supplements shall not be located closer than:

i. 5,000 feet from any airport property boundary (including the air operations area) if the airport does not sell Jet-A fuel and serves only piston-powered aircraft; or

ii. 10,000 feet from any airport property boundary (including the air operations area) if the airport sells Jet-A fuel and serves turbine-powered aircraft, or sells Jet-A fuel and is designed to serve turbine-powered and/or piston-powered aircraft.

j. Storage and processing of sewage sludge or biosolids is prohibited within any of the buffer zones indicated in Subparagraphs B.1.a-i of this Section.

k. Facilities located in, or within 1,000 feet of, swamps, marshes, wetlands, estuaries, wildlife-hatchery areas, habitat of endangered species, archaeological sites, historic sites, publicly owned recreation areas, and similar critical environmental areas shall be isolated from such areas

by effective barriers that eliminate probable adverse impacts from facility operations.

1. Facilities located in, or within 1,000 feet of, an aquifer recharge zone shall be designed to protect the area from adverse impacts of operations at the facility.

m. Access to facilities by land or water transportation shall be by all-weather roads or waterways that can meet the demands of the facility and are designed to avoid, to the extent practicable, congestion, sharp turns, obstructions, or other hazards conducive to accidents; and the surface roadways shall be adequate to withstand the weight of transportation vehicles.

2. Facility Characteristics

a. Perimeter Barriers, Security, and Signs

i. All facilities shall have a perimeter barrier around the facility that prevents unauthorized ingress or egress, except by willful entry.

ii. During operating hours, each facility entry point shall be continuously monitored, manned, or locked.

iii. During non-operating hours, each facility entry point shall be locked.

iv. All facilities that receive sewage sludge, other materials, feedstock, or supplements from off-site sources shall post readable signs that list the types of sewage sludge, other materials, feedstock, or supplements that can be received at the facility.

b. Fire Protection and Medical Care. All facilities shall have access to required fire protection and medical care with access gates that are wide enough to allow easy access for emergency vehicles, or such services shall be provided internally.

3. Facility Surface Hydrology

a. Surface-runoff-diversion levees, canals, or devices shall be installed to prevent drainage from the facility to adjoining areas during a 24-hour/25-year storm event. When rainfall records are not available, the design standard shall be 12 inches of rainfall below 31 degrees north latitude and 9 inches of rainfall above 31 degrees north latitude. If the 24-hour/25-year storm event level is lower, the design standard shall be required.

b. Storm water run-on shall be prevented from entering the receiving, processing, curing, and storage areas by the use of berms or other physical barriers.

c. The topography of the facility shall provide for drainage to prevent standing water and shall allow for drainage away from the facility.

d. All storm water and wastewater from a facility must conform to applicable requirements of LAC 33:IX.Chapters 23-67.

4. Facility Geology

a. Except as provided in Subparagraph B.4.c of this Section, facilities shall have natural stable soils of low

permeability for the area occupied by the facility, including vehicle parking and turnaround areas, that should provide a barrier to prevent any penetration of surface spills into groundwater aquifers underlying the area or to a sand or other water-bearing strata that would provide conduits to such an aquifer.

b. The natural soil surface must be capable of supporting heavy equipment operation during and after prolonged periods of rain.

c. A design for surfacing natural soils that do not meet the requirements in Subparagraphs B.4.a and b of this Section shall be prepared under the supervision of a registered engineer, licensed in the state of Louisiana with expertise in geotechnical engineering and geohydrology. Written certification by the engineer that the surface satisfies the requirements of Subparagraphs B.4.a and b of this Section shall be provided.

5. Facility Plans and Specifications. Facility plans and specifications represented and described in the permit applications or permit modifications for all facilities must be prepared under the supervision of, and certified by, a registered engineer, licensed in the state of Louisiana.

6. Notification of Completion. Within 10 days of completion of the facility or completion of a facility modification, the owner of the facility shall submit to the administrative authority:

- a. notification of completion; and
- b. a site inspection request.

C. Operations

1. Operational Requirements for All Preparers of Sewage Sludge

a. Facility Operations and Maintenance Manual

i. A facility operations and maintenance manual shall be developed and forwarded with the permit application to the administrative authority.

ii. The facility operations and maintenance manual shall describe, in specific detail, how the sewage sludge and the other feedstock or supplements to be blended, composted, or mixed with the sewage sludge (if applicable) will be managed during all phases of the preparation process and, if applicable, the land application process. At a minimum, the manual shall address the following:

- (a). preparation facility site and project description;
- (b). regulatory interfaces;
- (c). preparation process management plan;
- (d). odor management plan;
- (e). methods utilized for managing the biological conditions during the composting procedure (i.e., carbon/nitrogen ratio, moisture, O₂ levels, free air space), when composting is utilized as a preparation process;

- (f). worker health and safety management plan;
- (g). housekeeping and nuisance management plan;
- (h). emergency preparedness plan;
- (i). security, community relations, and public access plan;
- (j). regulated chemicals (list and location of regulated chemicals kept on-site);
- (k). monitoring, sampling, recordkeeping, and reporting procedures;
- (l). feedstock, supplements, and process management;
- (m). product distribution records;
- (n). pollutant reduction plan (for land application of biosolids);
- (o). pathogen treatment plan (for land application of biosolids);
- (p). vector attraction reduction plan (for land application of biosolids);
- (q). site application records (for land application of biosolids);
- (r). description of how the land application management practices are met (for land application of biosolids);
- (s). description of how the land application site and soil restrictions are met (for land application of biosolids);
- (t). operator certification; and
- (u). administration of the operations and maintenance manual.

iii. The facility operations and maintenance manual shall be kept on-site and readily available to employees and, if requested, to the administrative authority or his/her duly authorized representative.

b. Facility Operational Standards

i. The facility must include a receiving area, a mixing area, a curing area, a compost storage area for composting operations, drying and screening areas, and a truck wash area, which shall be located on surfaces capable of preventing groundwater contamination (periodic inspections of the surface shall be made to ensure that the underlying soils and the surrounding land surface are not being contaminated).

ii. All containers shall provide containment of the sewage sludge and the other feedstock or supplements to be blended, composted, or mixed with the sewage sludge, and thereby control litter and other pollution of adjoining areas.

iii. Provisions shall be made for the daily cleanup of the facility, including equipment and waste-handling areas.

iv. Treatment facilities for washdown and contaminated water shall be provided, or the wastewater contained, collected, and transported off-site to an approved wastewater treatment facility.

v. Leachate produced in the composting process:

(a). shall be collected and disposed off-site at a permitted facility; or

(b). shall be collected, treated, and discharged on-site in accordance with LAC 33:IX.Chapters 23-67; or

(c). may be reused in the composting process as a source of moisture.

vi. Sufficient equipment shall be provided and maintained at all facilities to meet their operational needs.

vii. Odor Management

(a). The production of odor shall be minimized.

(b). Processed air and other sources of odor shall be contained and, if necessary, treated in order to remove odor before discharging to the atmosphere.

viii. Receiving and Monitoring Sewage Sludge, Other Materials, Feedstock, or Supplements Used

(a). Any facility used to prepare sewage sludge shall be equipped with a device or method to determine quantity (by wet-weight tonnage), sources (whether the sewage sludge, other materials, feedstock, or supplements to be mixed with the sewage were generated in-state or out-of-state), and types of other materials, feedstock, or supplements. The facility shall also be equipped with a device or method to control entry of sewage sludge, other materials, feedstock, or supplements coming on-site and prevent entry of unrecorded or unauthorized deliverables (i.e., hazardous, industrial, unauthorized, or unpermitted solid waste).

(b). Other feedstock and supplements that are blended, composted, or mixed with sewage sludge shall be treated for the effective removal of sharps including, but not limited to, sewing needles, straight pins, hypodermic needles, telephone wires, and metal bracelets.

(c). Any facility used to prepare sewage sludge shall be equipped with a central control and recordkeeping system for tabulating the information required in Subclause C.1.b.viii.(a) of this Section.

ix. Personnel. All facilities shall have the personnel necessary to achieve the operational requirements of the facility.

2. Additional Operational Requirements for Composters

a. The composting procedure shall begin within 24 hours of receipt of the material to be prepared as a compost.

b. Adequate covers shall be provided for windrows during the curing stage to protect the compost from rainwater.

c. Covered areas shall be provided where feedstock is prepared.

d. Any compost made from sewage sludge that cannot be used according to these regulations shall be reprocessed or disposed of in an approved facility.

e. Composted sewage sludge shall be used, sold, or disposed of at a permitted disposal facility within 36 months of completion of the composting process.

f. The final composted product shall be stable and mature. In addition to meeting the applicable time and temperature for pathogen and vector attraction reduction requirements, proof of the stability and maturity of the final composted product shall be provided by utilizing the applicable methods in the source referenced in LAC 33:IX.7301.I.2.j.

3. Facility Closure Requirements

a. Notification of Intent to Close a Facility. All permit holders shall notify the administrative authority in writing at least 90 days before closure or intent to close, seal, or abandon any individual units within a facility and shall provide the following information:

- i. the date of planned closure;
- ii. changes, if any, requested in the approved closure plan; and
- iii. the closure schedule and estimated cost.

b. Closure Requirements

i. An insect and rodent inspection is required before closure. Extermination measures, if required, must be provided.

ii. All remaining untreated and unprepared sewage sludge, other materials, feedstock, and supplements shall be dewatered, removed, and disposed of in a permitted facility within 10 days of ceasing operations.

iii. All biosolids shall be used or disposed of in accordance with the provisions set forth in these regulations within 10 days of ceasing operations.

c. Additional Closure Requirements. Additional closure requirements for commercial preparers of sewage sludge who utilize composting as the process to prepare the sewage sludge and for all other commercial preparers of sewage sludge who prepare an amount of sewage sludge equal to or greater than 15,000 metric tons per year are as follows.

i. The permit holder shall verify that the soils within the facility boundary have not been contaminated in the operation of the facility.

ii. If contamination exists, in order to satisfy the closure requirements of this Section the permit holder must utilize the Risk Evaluation/Corrective Action Program

(RECAP) standards in accordance with LAC 33:I.Chapter 13 to the fullest extent possible. Any residual contamination must meet the RECAP standards approved by the administrative authority, including any residual contamination in the underlying and surrounding soils and/or groundwater. Otherwise, the permit holder shall enter into a cooperative agreement with the administrative authority to perform corrective action (i.e., additional closure activities including site investigation, remedial investigation, a corrective action study, and/or remedial action).

d. Closure Inspection. After the closure requirements have been met, the permit holder shall file a request for a closure inspection with the Office of Environmental Services.

e. Release of Closure Funds. After the closure inspection and subsequent determination by the administrative authority that a facility has completed closure, the administrative authority shall release the closure fund to the permit holder.

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§7307. Financial Assurance Requirements for Commercial Preparers of Sewage Sludge and Commercial Land Appliers of Biosolids

A. Purpose and Applicability. The purpose of this Section is to establish the financial assurance (the word *security* may be used interchangeably with *assurance*) requirements for:

1. commercial preparers of sewage sludge for meeting the requirements applicable during operation and closure; and
2. commercial land appliers of biosolids during operation and closure.

B. This Section shall be applicable to the entities listed in Subsection A of this Section when the following actions are taken by the department:

1. issuance of a new permit;
2. renewal of an existing permit;
3. modification of an existing permit; and
4. transfer of an existing permit to a different permittee.

C. Financial assurance mechanisms and instruments shall be submitted as follows.

1. The permit holder must submit to the administrative authority for approval a financial assurance mechanism drafted in accordance with this Section to cover the cost estimate for the closure requirements in LAC 33:IX.7305.C.3. The financial assurance mechanism shall be

submitted with the application under separate cover and be approved by the administrative authority as part of the permit issuance process. The financial assurance mechanism must be approved by the administrative authority prior to the permit holder's operating the facility.

2. All instruments used in this Section shall be submitted in the following manner.

a. The instrument shall be addressed to the Office of Environmental Services.

b. The original instrument shall be submitted.

c. The instrument shall be accompanied with a cover letter identifying the facility, agency interest number, and any other identifying information deemed necessary by the administrative authority.

D. Commercial preparers of sewage sludge and commercial land appliers of biosolids, hereinafter referred to in this Section as *affected persons*, have the following liability insurance responsibilities while their facilities are in operation.

1. All affected persons shall maintain liability insurance, or its equivalent, for sudden and accidental occurrences in the amount of \$1 million per occurrence and \$1 million annual aggregate, per site, exclusive of legal defense costs, for claims arising from injury to persons or property, owing to the operation of the site. Commercial preparers of sewage sludge and commercial land appliers of biosolids are exempt from these requirements if the amount of sewage sludge prepared or the amount of biosolids applied to the land is less than 15,000 metric tons per year. Evidence of this coverage shall be updated annually and provided to the Office of Environmental Services. This financial assurance may be established by any one or a combination of the following mechanisms.

a. Insurance. Evidence of liability insurance may consist of either a signed duplicate original of a liability endorsement in favor of the affected person, or a certificate of insurance. The wording of a liability endorsement shall be identical to the wording in LAC 33:IX.7395.Appendix A, except that the instructions in brackets are to be replaced with the relevant information, and the brackets deleted. The wording of a certificate of insurance shall be identical to the wording in LAC 33:IX.7395.Appendix B, except that the instructions in brackets are to be replaced with the relevant information, and the brackets deleted. All liability endorsements and certificates of insurance must include:

i. a statement of coverage relative to environmental risks;

ii. a statement of all exclusions to the policy; and

iii. a certification by the insurer that the insurance afforded with respect to such sudden accidental occurrences is subject to all of the terms and conditions of the policy, provided, however, that any provisions of the policy inconsistent with Subclauses D.1.a.iii.(a)-(f) of this Section are amended to conform with said Subclauses:

(a). bankruptcy or insolvency of the insured shall not relieve the insurer of its obligations under the policy;

(b). the insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the insured for any such payment made by the insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in Subparagraphs D.1.b-d of this Section;

(c). whenever requested by the administrative authority, the insurer agrees to furnish to the administrative authority a signed duplicate original of the policy and all endorsements;

(d). cancellation of the policy, whether by the insurer or the insured, will be effective only upon written notice and upon lapse of 60 days after a copy of such written notice is received by the Office of Environmental Services;

(e). any other termination of the policy will be effective only upon written notice and upon lapse of 30 days after a copy of such written notice is received by the Office of Environmental Services; and

(f). the insurer is admitted, authorized, or eligible to conduct insurance business in the state of Louisiana.

b. Letter of Credit. An affected person may satisfy the requirements of this Subsection by obtaining an irrevocable letter of credit that conforms to all of the following requirements and submitting the letter to the administrative authority.

i. The issuing institution must be an entity that has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or state agency.

ii. An affected person who uses a letter of credit to satisfy the requirements of this Subsection must also provide to the administrative authority evidence of the establishment of a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the administrative authority will be deposited by the issuing institution directly into the standby trust fund. The wording of the standby trust fund agreement shall be identical to the wording in LAC 33:IX.7395.Appendix D, except that the instructions in brackets are to be replaced with the relevant information, and the brackets deleted. The trust agreement shall be accompanied by a formal certification of acknowledgement, as in the example in LAC 33:IX.7395.Appendix D.

iii. The letter of credit must be accompanied by a letter from the affected person referring to the letter of credit by number, name of issuing institution, and date, and providing the following information:

(a). the agency interest number;

(b). the site name, if applicable;

(c). the facility name;

(d). the facility permit number; and

(e). the amount of funds assured for liability coverage of the facility by the letter of credit.

iv. The letter of credit must be irrevocable and issued for a period of at least one year unless, at least 120 days before the current expiration date, the issuing institution notifies both the affected person and the administrative authority by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the 120 days will begin on the date when both the affected person and the Office of Environmental Services receive the notice, as evidenced by the return receipts.

v. The wording of the letter of credit shall be identical to the wording in LAC 33:IX.7395.Appendix C, except that the instructions in brackets are to be replaced with the relevant information (i.e., type of affected person), and the brackets deleted.

c. Financial Test

i. To meet this test, the affected person or parent corporation (corporate guarantor) of the affected person must submit to the Office of Environmental Services the documents required by Subparagraph E.2.h of this Section demonstrating that the requirements of Subparagraph E.2.h of this Section have been met. Use of the financial test may be disallowed on the basis of the accessibility of the assets of the affected person or parent corporation (corporate guarantor). If the affected person or parent corporation is using the financial test to demonstrate liability coverage and closure, only one letter from the chief financial officer is required.

ii. The assets of the parent corporation of the affected person shall not be used to determine whether the affected person satisfies the financial test, unless the parent corporation has supplied a corporate guarantee as authorized in Subparagraph D.1.d of this Section.

iii. The wording of the financial test shall be as specified in Clause E.2.h.iv of this Section.

d. Corporate Guarantee

i. An affected person may meet the requirements of Paragraph D.1 of this Section for liability coverage by obtaining a written guarantee, hereafter referred to as a *corporate guarantee*. The guarantor must demonstrate to the administrative authority that the guarantor meets the requirements in this Subsection and must comply with the terms of the corporate guarantee. The corporate guarantee must accompany the items sent to the administrative authority specified in Clauses E.2.h.ii and iv of this Section. The terms of the corporate guarantee must be in an authentic act signed and sworn to by an authorized officer of the corporation before a notary public and must provide that:

(a). the guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in Subparagraph E.2.h of this Section;

(b). the guarantor is the parent corporation of the affected person to be covered by the guarantee, and the guarantee extends to certain facilities;

(c). if the affected person fails to satisfy a judgment based on a determination of liability for bodily injury or property damage to third parties caused by sudden and accidental occurrences (or both as the case may be), arising from the operation of facilities covered by the corporate guarantee, or fails to pay an amount agreed to in settlement of the claims arising from or alleged to arise from such injury or damage, the guarantor will do so up to the limits of coverage;

(d). the guarantor agrees that if, at the end of any fiscal year before termination of the guarantee, the guarantor fails to meet the financial test criteria, the guarantor shall send within 90 days, by certified mail, notice to the Office of Environmental Services and to the affected person, that he intends to provide alternative financial assurance as specified in this Subsection, in the name of the affected person, and that within 120 days after the end of said fiscal year the guarantor shall establish such financial assurance, unless the affected person has done so;

(e). the guarantor agrees to notify the Office of Environmental Services by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the guarantor as debtor, within 10 days after commencement of the proceeding;

(f). the guarantor agrees that within 30 days after being notified by the administrative authority of a determination that the guarantor no longer meets the financial test criteria or that he or she is disallowed from continuing as a guarantor of closure, he or she shall establish alternate financial assurance as specified in this Subsection in the name of the affected person unless the affected person has done so;

(g). the guarantor agrees to remain bound under the guarantee notwithstanding any or all of the following: amendment or modification of the permit, or any other modification or alteration of an obligation of the affected person in accordance with these regulations;

(h). the guarantor agrees to remain bound under the guarantee for as long as the affected person must comply with the applicable financial assurance requirements of Paragraph E.2 of this Section for the facilities covered by the guarantee, except that the guarantor may cancel this guarantee by sending notice by certified mail to the administrative authority and the affected person. Such a cancellation will become effective no earlier than 90 days after receipt of such notice by both the administrative authority and the affected person, as evidenced by the return receipts;

(i). the guarantor agrees that if the affected person fails to provide alternate financial assurance, as specified in this Subsection, and obtain written approval of such assurance from the administrative authority within 60 days after the administrative authority receives the

guarantor's notice of cancellation, the guarantor shall provide such alternate financial assurance in the name of the affected person;

(j). the guarantor expressly waives notice of acceptance of the guarantee by the administrative authority or by the affected person. The guarantor also expressly waives notice of amendments or modifications of the facility permit; and

(k). the wording of the corporate guarantee shall be as specified in Clause E.2.h.ix of this Section.

ii. A corporate guarantee may be used to satisfy the requirements of this Section only if the attorney general(s) or insurance commissioner(s) of the state in which the guarantor is incorporated, and the state in which the facility covered by the guarantee is located, has submitted a written statement to the Office of Environmental Services that a corporate guarantee is a legally valid and enforceable obligation in that state.

2. The use of a particular financial assurance mechanism is subject to the approval of the administrative authority.

3. Affected persons must submit evidence of financial assurance in accordance with this Section at least 60 days before the date on which sewage sludge, other materials, feedstock, or supplements are first received for processing.

E. Financial Assurance for Closure for Commercial Preparers of Sewage Sludge and Commercial Land Appliers of Biosolids

1. Commercial preparers of sewage sludge and commercial land appliers of biosolids, hereinafter referred to in this Section as *affected persons*, shall maintain financial assurance in the amount of \$25,000 per site for closure if the amount of sewage sludge prepared or the amount of biosolids applied to the land is less than 15,000 metric tons per year. Evidence of this coverage shall be updated annually and provided to the Office of Environmental Services. This financial assurance may be established by any one or a combination of the methods in Subparagraph E.2.b of this Section. If these requirements cannot be met, an alternative financial assurance mechanism shall be submitted for review and approval by the administrative authority. Such an alternative financial assurance mechanism shall not result in a value of financial assurance that is less than the amount provided as a written cost estimate for closure of the facility in the permit application.

2. All affected persons not covered in Paragraph E.1 of this Section shall establish and maintain financial assurance for closure in accordance with LAC 33:IX.7305.C.3, and shall submit to the Office of Environmental Services the estimated closure date and the estimated cost of closure in accordance with the following requirements.

a. The affected person must have a written estimate, in current dollars, of the cost of closing the facility in accordance with the requirements in these regulations. The

estimate must equal the cost of closure at the point in the facility's operating life when the extent and manner of its operation would make closure the most expensive, as indicated by the closure plan, and shall be based on the cost of hiring a third party to close the facility in accordance with the closure plan.

i. The cost estimates must be adjusted within 30 days after each anniversary of the date on which the first cost estimate was prepared, on the basis of either the inflation factor derived from the Annual Implicit Price Deflator for Gross Domestic Product, as published by the U.S. Department of Commerce in its *Survey of Current Business*, or a re-estimation of the closure costs in accordance with Subparagraph E.2.a of this Section. The affected person must revise the cost estimate whenever a change in the closure plan increases or decreases the cost of the closure plan. The affected person must submit a written notice of any such adjustment to the Office of Environmental Services within 15 days following such adjustment.

ii. For trust funds, the first payment must be at least equal to the current closure cost estimate, divided by the number of years in the pay-in period. Subsequent payments must be made no later than 30 days after each annual anniversary of the date of the first payment. The amount of each subsequent payment must be determined by subtracting the current value of the trust fund from the current closure cost estimate and dividing the result by the number of years remaining in the pay-in period. The initial pay-in period is based on the estimated life of the facility.

b. Financial Assurance Instruments. The financial assurance instrument must be one or a combination of the following: a trust fund, a financial guarantee bond ensuring closure funding, a performance bond, a letter of credit, an insurance policy, or the financial test. The financial assurance mechanism is subject to the approval of the administrative authority and must fulfill the following criteria.

i. Except when a financial test, trust fund, or certificate of insurance is used as the financial assurance mechanism, a standby trust fund naming the administrative authority as beneficiary must be established at the time of the creation of the financial assurance mechanism into which the proceeds of such mechanism could be transferred should such funds be necessary for closure of the facility, and a signed copy must be furnished to the administrative authority with the mechanism.

ii. An affected person may use a financial assurance mechanism specified in this Section for more than one facility, if all such facilities are located within the state of Louisiana and are specifically identified in the mechanism.

iii. The amount covered by the financial assurance mechanisms must equal the total of the current closure cost estimate for each facility covered.

iv. When all closure requirements have been satisfactorily completed, the administrative authority shall execute an approval to terminate the financial assurance mechanisms.

c. **Trust Funds.** An affected person may satisfy the requirements of this Section by establishing a closure trust fund that conforms to the following requirements and submitting an originally-signed duplicate of the trust agreement to the Office of Environmental Services.

i. The trustee must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

ii. Trusts must be accomplished in accordance with and subject to the laws of the state of Louisiana. The beneficiary of the trust shall be the administrative authority.

iii. Trust fund earnings may be used to offset required payments into the fund, to pay the fund trustee, or to pay other expenses of the funds, or may be reclaimed by the affected person upon approval of the administrative authority.

iv. The trust agreement must be accompanied by an affidavit certifying the authority of the individual signing the trust on behalf of the affected person.

v. The affected person may accelerate payments into the trust fund or deposit the full amount of the current closure cost estimate at the time the fund is established. The affected person must, however, maintain the value of the fund at no less than the value that the fund would have if annual payments were made as specified in Clause E.2.a.ii of this Section.

vi. If the affected person establishes a trust fund after having used one or more of the alternate instruments specified in this Section, the first payment must be in at least the amount that the fund would contain if the trust fund were established initially and annual payments made according to the specifications of Clause E.2.a.ii of this Section.

vii. After the pay-in period is completed, whenever the current cost estimate changes, the affected person must compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the affected person, within 60 days after the change in the cost estimate, must either deposit an amount into the fund that will make its value at least equal to the amount of the closure cost estimate, or obtain other financial assurance as specified in this Section to cover the difference.

viii. After beginning final closure, an affected person or any other person authorized by the affected person to perform closure may request reimbursement for closure expenditures by submitting itemized bills to the Office of Environmental Services. Within 60 days after receiving bills for such activities, the administrative authority will determine whether the closure expenditures are in accordance with the closure plan or otherwise justified, and, if so, he or she will instruct the trustee to make

reimbursement in such amounts as the administrative authority specifies in writing. If the administrative authority has reason to believe that the cost of closure will be significantly greater than the value of the trust fund, he may withhold reimbursement for such amounts as he deems prudent until he determines that the affected person is no longer required to maintain financial assurance.

ix. The wording of the trust agreement shall be identical to the wording in LAC 33:IX.7395.Appendix D, except that the instructions in brackets are to be replaced with the relevant information, and the brackets deleted. The trust agreement shall be accompanied by a formal certification of acknowledgement, as in the example in LAC 33:IX.7395.Appendix D.

d. **Surety Bonds.** An affected person may satisfy the requirements of this Subsection by obtaining a surety bond that conforms to the following requirements and submitting the bond to the Office of Environmental Services.

i. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on federal bonds in Circular 570 of the U.S. Department of the Treasury, and be approved by the administrative authority.

ii. The affected person who uses a surety bond to satisfy the requirements of this Subsection must also provide to the administrative authority evidence of the establishment of a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the administrative authority. The wording of the standby trust fund shall be identical to the wording in LAC 33:IX.7395.Appendix D, except that the instructions in brackets are to be replaced with the relevant information, and the brackets deleted. The standby trust agreement shall be accompanied by a formal certification of acknowledgement, as in the example in LAC 33:IX.7395.Appendix D.

iii. The bond must guarantee that the affected person will:

(a). fund the standby trust fund in an amount equal to the penal sum of the bond before the beginning of final closure of the facility;

(b). fund the standby trust fund in an amount equal to the penal sum within 15 days after an order to begin closure is issued; or

(c). provide alternate financial assurance, as specified in this Section, and obtain the administrative authority's written approval of the assurance provided, within 90 days after receipt by both the affected person and the administrative authority of a notice of cancellation of the bond from the surety.

iv. The terms of the bond must provide that the surety will become liable on the bond obligation when the affected person fails to perform as guaranteed by the bond.

v. The penal sum of the bond must be at least equal to the current closure cost estimate.

vi. Whenever the current closure cost estimate increases to an amount greater than the penal sum, the affected person, within 60 days after the increase, must either cause the penal sum to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the Office of Environmental Services, or obtain other financial assurance as specified in this Section to cover the increase. Whenever the current closure cost estimate decreases, the penal sum may be reduced to the amount of the current closure cost estimate following written approval by the administrative authority.

vii. Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the affected person and to the Office of Environmental Services. Cancellation may not occur, however, before 120 days have elapsed, beginning on the date that both the affected person and the administrative authority have received the notice of cancellation, as evidenced by the return receipts.

viii. The wording of the surety bond guaranteeing payment into a standby trust fund shall be identical to the wording in LAC 33:IX.7395.Appendix E, except that the instructions in brackets are to be replaced with the relevant information, and the brackets deleted.

e. Performance Bonds. An affected person may satisfy the requirements of this Subsection by obtaining a surety bond that conforms to the following requirements and submitting the bond to the Office of Environmental Services.

i. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on federal bonds in Circular 570 of the U.S. Department of the Treasury, and be approved by the administrative authority.

ii. The affected person who uses a surety bond to satisfy the requirements of this Subsection must also provide to the administrative authority evidence of establishment of a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the administrative authority. The wording of the standby trust agreement shall be identical to the wording in LAC 33:IX.7395.Appendix D, except that the instructions in brackets are to be replaced with the relevant information, and the brackets deleted. The standby trust agreement shall be accompanied by a formal certification of acknowledgement, as in the example in LAC 33:IX.7395.Appendix D.

iii. The bond must guarantee that the affected person will:

(a). perform final closure in accordance with the closure plan and other requirements of the permit for the facility whenever required to do so; or

(b). provide alternate financial assurance, as specified in this Section, and obtain the administrative authority's written approval of the assurance provided, within 90 days after the date both the affected person and the

administrative authority receive notice of cancellation of the bond from the surety.

iv. The terms of the bond must provide that the surety will become liable on the bond obligation when the affected person fails to perform as guaranteed by the bond. Following a determination by the administrative authority that the affected person has failed to perform final closure in accordance with the closure plan and other permit requirements when required to do so, under the terms of the bond the surety will perform final closure as guaranteed by the bond or will deposit the amount of the penal sum into the standby trust fund.

v. The penal sum of the bond must be at least equal to the current closure cost estimate.

vi. Whenever the current closure cost estimate increases to an amount greater than the penal sum, the affected person, within 60 days after the increase, must either cause the penal sum to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the Office of Environmental Services, or obtain other financial assurance as specified in this Section. Whenever the current cost estimate decreases, the penal sum may be reduced to the amount of the current cost estimate after written approval of the administrative authority.

vii. Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the affected person and to the Office of Environmental Services. Cancellation may not occur before 120 days have elapsed, beginning on the date that both the affected person and the administrative authority have received the notice of cancellation, as evidenced by the return receipts.

viii. The wording of the performance bond shall be identical to the wording in LAC 33:IX.7395.Appendix F, except that the instructions in brackets are to be replaced with the relevant information, and the brackets deleted.

f. Letter of Credit. An affected person may satisfy the requirements of this Subsection by obtaining an irrevocable standby letter of credit that conforms to the following requirements and submitting the letter to the Office of Environmental Services.

i. The issuing institution must be an entity that has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or state agency.

ii. The affected person who uses a letter of credit to satisfy the requirements of this Subsection must also provide to the administrative authority evidence of the establishment of a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the administrative authority will be deposited by the issuing institution directly into the standby trust fund. The wording of the standby trust fund shall be identical to the wording in LAC 33:IX.7395.Appendix D, except that the instructions in brackets are to be replaced with the relevant information,

and the brackets deleted. The standby trust agreement shall be accompanied by a formal certification of acknowledgement, as in the example in LAC 33:IX.7395.Appendix D.

iii. The letter of credit must be accompanied by a letter from the affected person referring to the letter of credit by number, issuing institution, and date, and providing the following information:

- (a). the agency interest number;
- (b). the site name, if applicable;
- (c). the facility name;
- (d). the facility permit number; and

(e). the amount of funds assured for closure of the facility by the letter of credit.

iv. The letter of credit must be irrevocable and issued for a period of at least one year unless, at least 120 days before the current expiration date, the issuing institution notifies both the affected person and the Office of Environmental Services by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the 120 days will begin on the date when both the affected person and the administrative authority have received the notice, as evidenced by the return receipts.

v. The letter of credit must be issued in an amount at least equal to the current closure cost estimate.

vi. Whenever the current cost estimates increase to an amount greater than the amount of the credit, the affected person, within 60 days after the increase, must either cause the amount of the credit to be increased so that it at least equals the current closure cost estimate and submit evidence of such increase to the Office of Environmental Services, or obtain other financial assurance as specified in this Subsection to cover the increase. Whenever the current cost estimate decreases, the amount of the credit may be reduced to the amount of the current closure cost estimate upon written approval of the administrative authority.

vii. Following a determination by the administrative authority that the affected person has failed to perform final closure in accordance with the closure plan and other permit requirements when required to do so, the administrative authority may draw on the letter of credit.

viii. The wording of the letter of credit shall be identical to the wording in LAC 33:IX.7395.Appendix G, except that the instructions in brackets are to be replaced with the relevant information, and the brackets deleted.

g. Insurance. An affected person may satisfy the requirements of this Subsection by obtaining insurance that conforms to the following requirements and submitting a certificate of such insurance to the Office of Environmental Services.

i. At a minimum, the insurer must be licensed to transact the business of insurance, or eligible to provide insurance as an excess- or surplus-lines insurer in one or

more states, and authorized to transact insurance business in the state of Louisiana.

ii. The insurance policy must be issued for a face amount at least equal to the current closure cost estimate.

iii. The term "face amount" means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer's future liability will be lowered by the amount of the payments.

iv. The insurance policy must guarantee that funds will be available to close the facility. The policy must also guarantee that, once final closure begins, the insurer will be responsible for paying out funds up to an amount equal to the face amount of the policy, upon the direction of the administrative authority, to such party or parties as the administrative authority specifies.

v. After beginning final closure, an affected person or any other person authorized by the affected person to perform closure may request reimbursement for closure expenditures by submitting itemized bills to the Office of Environmental Services. Within 60 days after receiving such bills, the administrative authority will determine whether the expenditures are in accordance with the closure plan or otherwise justified, and if so, he or she will instruct the insurer to make reimbursement in such amounts as the administrative authority specifies in writing.

vi. The affected person must maintain the policy in full force and effect until the administrative authority consents to termination of the policy by the affected person.

vii. Each policy must contain a provision allowing assignment of the policy to a successor of an affected person. Such assignment may be conditional upon consent of the insurer, provided consent is not unreasonably refused.

viii. The policy must provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy must, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the affected person and the Office of Environmental Services. Cancellation, termination, or failure to renew may not occur, however, before 120 days have elapsed, beginning on the date that both the administrative authority and the affected person have received the notice of cancellation, as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur, and the policy will remain in full force and effect in the event that, on or before the date of expiration:

(a). the administrative authority deems the facility abandoned;

(b). the permit is terminated or revoked or a new permit is denied;

(c). closure is ordered;

(d). the affected person is named as debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code; or

(e). the premium due is paid.

ix. Whenever the current cost estimate increases to an amount greater than the face amount of the policy, the affected person, within 60 days after the increase, must either increase the face amount to at least equal to the current closure cost estimate and submit evidence of such increase to the Office of Environmental Services, or obtain other financial assurance as specified in this Subsection to cover the increase. Whenever the current cost estimate decreases, the face amount may be reduced to the amount of the current closure cost estimate following written approval by the administrative authority.

x. The wording of the certificate of insurance shall be identical to the wording in LAC 33:IX.7395.Appendix H, except that the instructions in brackets are to be replaced with the relevant information, and the brackets deleted.

h. Financial Test. An affected person or a parent corporation of the affected person, which will be responsible for the financial obligations, may satisfy the requirements of this Section by demonstrating that a financial test as specified in this Subparagraph is met. The assets of the parent corporation of the affected person shall not be used to determine whether the affected person satisfies the financial test, unless the parent corporation has supplied a corporate guarantee as outlined in Subparagraph D.1.d and/or Clause E.2.h.ix of this Section.

i. To pass this test, the affected person or parent corporation of the affected person must meet either of the following criteria:

(a). the affected person or parent corporation of the affected person must have:

(i). tangible net worth of at least six times the sum of the current closure cost estimate to be demonstrated by this test and the amount of liability coverage to be demonstrated by this test;

(ii). tangible net worth of at least \$10 million;
and

(iii).assets in the United States amounting to either at least 90 percent of its total assets, or at least six times the sum of the current closure cost estimate, to be demonstrated by this test, and the amount of liability coverage to be demonstrated by this test; or

(b). the affected person or parent corporation of the affected person must have:

(i). a current rating for its most recent bond issuance of AAA, AA, A, or BBB, as issued by *Standard and Poor's*, or Aaa, Aa, or Baa, as issued by *Moody's*;

(ii). tangible net worth of at least \$10 million;
and

(iii).assets in the United States amounting to either 90 percent of its total assets or at least six times the sum of the current closure cost estimate, to be demonstrated by this test, and the amount of liability coverage to be demonstrated by this test.

ii. To demonstrate that this test is met, the affected person or parent corporation of the affected person must submit the following three items to the Office of Environmental Services:

(a). a letter signed by the chief financial officer of the affected person or parent corporation demonstrating and certifying the criteria in Clause E.2.h.i of this Section and including the information required by Clause E.2.h.iv of this Section. If the financial test is provided to demonstrate both assurance for closure and liability coverage, a single letter to cover both forms of financial assurance is required;

(b). a copy of the report of the independent certified public accountant (CPA) on the financial statements of the affected person or parent corporation of the affected person for the latest completed fiscal year; and

(c). a special report from the independent CPA to the affected person or parent corporation of the affected person stating that:

(i). the CPA has computed the data specified by the chief financial officer as having been derived from the independently audited, year-end financial statements with the amounts for the latest fiscal year in such financial statements; and

(ii). in connection with that procedure, no matters came to his attention that caused him to believe that the specified data should be adjusted.

iii. The administrative authority may disallow use of this test on the basis of the opinion expressed by the independent CPA in his report on qualifications based on the financial statements. An adverse opinion or a disclaimer of opinion will be cause for disallowance. The administrative authority will evaluate other qualifications on an individual basis. The administrative authority may disallow the use of this test on the basis of the accessibility of the assets of the parent corporation (corporate guarantor) or affected person. The affected person or parent corporation must provide evidence of insurance for the entire amount of required liability coverage, as specified in this Section, within 30 days after notification of disallowance.

iv. The affected person or parent corporation (if a corporate guarantor) of the affected person shall provide to the Office of Environmental Services a letter from the chief financial officer, the wording of which shall be identical to the wording in LAC 33:IX.7395.Appendix I, except that the instructions in brackets are to be replaced with the relevant information, and the brackets deleted. The letter shall certify the following information:

(a). a list of facilities, whether in the state of Louisiana or not, owned or operated by the affected person of the facility, for which financial assurance for liability

coverage is demonstrated through the use of financial tests, including the amount of liability coverage;

(b). a list of facilities, whether in the state of Louisiana or not, owned or operated by the affected person, for which financial assurance for the closure is demonstrated through the use of a financial test or self-insurance by the affected person, including the cost estimates for the closure of each facility;

(c). a list of the facilities, whether in the state of Louisiana or not, owned or operated by any subsidiaries of the parent corporation for which financial assurance for closure is demonstrated through the financial test or through use of self-insurance, including the current cost estimate for the closure for each facility and the amount of annual aggregate liability coverage for each facility; and

(d). a list of facilities, whether in the state of Louisiana or not, for which financial assurance for closure is not demonstrated through the financial test, self-insurance, or other substantially equivalent state instruments, including the estimated cost of closure of such facilities.

v. For the purposes of this Subsection the phrase *tangible net worth* shall mean the tangible assets that remain after liabilities have been deducted; such assets would not include intangibles such as good will and rights to patents or royalties.

vi. The phrase *current closure cost estimate*, as used in Clause E.2.h.i of this Section, includes the cost estimate required to be shown in Division E.2.h.i.(a).(i) of this Section.

vii. After initial submission of the items specified in Clause E.2.h.ii of this Section, the affected person or parent corporation of the affected person must send updated information to the Office of Environmental Services within 90 days after the close of each succeeding fiscal year. This information must include all three items specified in Clause E.2.h.ii of this Section.

viii. The administrative authority may, on the basis of a reasonable belief that the affected person or parent corporation of the affected person may no longer meet the requirements of this Subparagraph, require reports of financial condition at any time in addition to those specified in Clause E.2.h.ii of this Section. If the administrative authority finds, on the basis of such reports or other information, that the affected person or parent corporation of affected person no longer meets the requirements of Clause E.2.h.ii of this Section, the affected person or parent corporation of the affected person must provide alternate financial assurance as specified in this Subsection within 30 days after notification of such a finding.

ix. An affected person may meet the requirements of this Subparagraph for closure by obtaining a written guarantee, hereafter referred to as a *corporate guarantee*. The guarantor must be the parent corporation of the affected person. The guarantor must meet the requirements and submit all information required for affected persons in Clauses E.2.h.i-viii of this Section and must comply with the

terms of the corporate guarantee. The corporate guarantee must accompany the items sent to the administrative authority specified in Clauses E.2.h.ii and iv of this Section. The wording of the corporate guarantee must be identical to the wording in LAC 33:IX.7395.Appendix J, except that instructions in brackets are to be replaced with the relevant information, and the brackets deleted. The terms of the corporate guarantee must be in an authentic act signed and sworn by an authorized officer of the corporation before a notary public and must provide that:

(a). the guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in Clauses E.2.h.ii and iv of this Section;

(b). the guarantor is the parent corporation of the affected person of the facilities to be covered by the guarantee, and the guarantee extends to certain facilities;

(c). *closure plans*, as used in the guarantee, refers to the plans maintained as required by the state of Louisiana regulations for the closure of facilities, as identified in the guarantee;

(d). for value received from the affected person, the guarantor guarantees to the Office of Environmental Services that the affected person will perform closure of the facility or facilities listed in the guarantee, in accordance with the closure plan and other permit or regulatory requirements whenever required to do so. In the event that the affected person fails to perform as specified in the closure plan, the guarantor shall do so or establish a trust fund as specified in Subparagraph E.2.c of this Section, in the name of the affected person, in the amount of the current closure cost estimate or as specified in Clause E.2.b.ii of this Section;

(e). the guarantor agrees that if, at the end of any fiscal year before termination of the guarantee, the guarantor fails to meet the financial test criteria, the guarantor shall send within 90 days after the end of the fiscal year, by certified mail, notice to the Office of Environmental Services and to the affected person that he intends to provide alternative financial assurance as specified in this Subsection, in the name of the affected person, and that within 120 days after the end of such fiscal year, the guarantor shall establish such financial assurance unless the affected person has done so;

(f). the guarantor agrees to notify the Office of Environmental Services by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the guarantor as debtor, within 10 days after commencement of the proceeding;

(g). the guarantor agrees that within 30 days after being notified by the administrative authority of a determination that the guarantor no longer meets the financial test criteria or that the guarantor is disallowed from continuing as a guarantor of closure, the guarantor will establish alternate financial assurance as specified in this

Subsection in the name of the affected person, unless the affected person has done so;

(h). the guarantor agrees to remain bound under the guarantee, notwithstanding any or all of the following: amendment or modification of the closure plan, amendment or modification of the permit, extension or reduction of the time of performance of closure, or any other modification or alteration of an obligation of the affected person in accordance with these regulations;

(i). the guarantor agrees to remain bound under the guarantee for as long as the affected person must comply with the applicable financial assurance requirements of this Subsection for the facilities covered by the corporate guarantee, except that the guarantor may cancel this guarantee by sending notice by certified mail to the Office of Environmental Services and the affected person. The cancellation will become effective no earlier than 90 days after receipt of such notice by both the administrative authority and the affected person, as evidenced by the return receipts;

(j). the guarantor agrees that if the affected person fails to provide alternative financial assurance as specified in this Subsection, and to obtain written approval of such assurance from the administrative authority within 60 days after the administrative authority receives the guarantor's notice of cancellation, the guarantor shall provide such alternate financial assurance in the name of the affected person; and

(k). the guarantor expressly waives notice of acceptance of the guarantee by the administrative authority or by the affected person. The guarantor also expressly waives notice of amendments or modifications of the closure plan and of amendments or modifications of the facility permit.

i. Local Government Financial Test. An affected person that is a local government and that satisfies the requirements of Clauses E.2.i.i-iii of this Section may demonstrate financial assurance up to the amount specified in Clause E.2.i.iv of this Section.

i. Financial Component

(a). The affected person must satisfy the following conditions, as applicable:

(i). if the affected person has outstanding, rated, general obligation bonds that are not secured by insurance, a letter of credit, or other collateral or guarantee, he must have a current rating of Aaa, Aa, A, or Baa, as issued by *Moody's*, or AAA, AA, A, or BBB, as issued by *Standard and Poor's*, on all such general obligation bonds; or

(ii). the affected person must have a ratio of cash plus marketable securities to total expenditures greater than or equal to 0.05 and a ratio of annual debt service to total expenditures less than or equal to 0.20 based on the affected person's most recent audited annual financial statement.

(b). The affected person must prepare its financial statements in conformity with *Generally Accepted Accounting Principles* for governments and have the financial statements audited by an independent certified public accountant (or appropriate state agency).

(c). A local government is not eligible to assure its obligations under this Subparagraph if it:

(i). is currently in default on any outstanding general obligation bonds;

(ii). has any outstanding general obligation bonds rated lower than Baa as issued by *Moody's* or BBB as issued by *Standard and Poor's*;

(iii). operated at a deficit equal to 5 percent or more of total annual revenue in each of the past two fiscal years; or

(iv). receives an adverse opinion, disclaimer of opinion, or other qualified opinion from the independent certified public accountant (or appropriate state agency) auditing its financial statement as required under Subclause E.2.i.i.(b) of this Section. The administrative authority may evaluate qualified opinions on a case-by-case basis and allow use of the financial test in cases where the administrative authority deems the qualification insufficient to warrant disallowance of use of the test.

(d). The following terms used in this Paragraph are defined as follows.

(i). *Deficit*—total annual revenues minus total annual expenditures.

(ii). *Total Revenues*—revenues from all taxes and fees, but not including the proceeds from borrowing or asset sales, excluding revenue from funds managed by local government on behalf of a specific third party.

(iii). *Total Expenditures*—all expenditures, excluding capital outlays and debt repayment.

(iv). *Cash Plus Marketable Securities*—all the cash plus marketable securities held by the local government on the last day of a fiscal year, excluding cash and marketable securities designated to satisfy past obligations such as pensions.

(v). *Debt Service*—the amount of principal and interest due on a loan in a given time period, typically the current year.

ii. Public Notice Component. The local government affected person must place a reference to the closure costs assured through the financial test into its next comprehensive annual financial report (CAFR) after the effective date of this Section or prior to the initial receipt of sewage sludge, other feedstock, or supplements at the facility, whichever is later. Disclosure must include the nature and source of closure requirements, the reported liability at the balance sheet date, the estimated total closure cost remaining to be recognized, the percentage of landfill capacity used to date, and the estimated landfill life in years. For closure costs, conformance with *Governmental*

Accounting Standards Board Statement 18 assures compliance with this public notice component.

iii. Recordkeeping and Reporting Requirements

(a). The local government affected person must place the following items in the facility's operating record:

(i). a letter signed by the local government's chief financial officer that lists all the current cost estimates covered by a financial test, as described in Clause E.2.i.iv of this Section. It must provide evidence that the local government meets the conditions of Subclauses E.2.i.i.(a)-(c) of this Section, and certify that the local government meets the conditions of Subclauses E.2.i.i.(a)-(c) and Clauses E.2.i.ii and iv of this Section;

(ii). the local government's independently audited year-end financial statements for the latest fiscal year (except for local governments where audits are required every two years, and unaudited statements may be used in years when audits are not required), including the unqualified opinion of the auditor, who must be an independent certified public accountant or an appropriate state agency that conducts equivalent comprehensive audits;

(iii). a report to the local government from the local government's independent certified public accountant or the appropriate state agency based on performing an agreed-upon procedures engagement relative to the financial ratios required by Division E.2.i.i.(a)(i) of this Section, if applicable, and the requirements of Subclause E.2.i.i.(b) and Divisions E.2.i.i.(c)(i)-(iv) of this Section. The report by the certified public accountant or state agency should state the procedures performed and the findings of the certified public accountant or state agency; and

(iv). a copy of the comprehensive annual financial report (CAFR) used to comply with Clause E.2.i.ii of this Section (certification that the requirements of *General Accounting Standards Board Statement 18* have been met).

(b). The items required in Subclause E.2.i.iii.(a) of this Section must be placed in the facility operating record, in the case of closure, either before the effective date of this Section or prior to the initial receipt of sewage sludge, other feedstock, or supplements at the facility, whichever is later.

(c). After the initial placement of the items in the facility's operating record, the local government affected person must update the information and place the updated information in the operating record within 180 days following the close of the affected person's fiscal year.

(d). The local government affected person is no longer required to meet the requirements of Subclause E.2.i.iii.(c) of this Section when:

(i). the affected person substitutes alternate financial assurance, as specified in this Section; or

(ii). the affected person is released from the requirement of maintaining financial assurance in accordance with this Section.

(e). A local government must satisfy the requirements of the financial test at the close of each fiscal year. If the local government affected person no longer meets the requirements of the local government financial test, it must, within 210 days following the close of the affected person's fiscal year, obtain alternative financial assurance that meets the requirements of this Section, place the required submissions for that assurance in the operating record, and notify the Office of Environmental Services that the affected person no longer meets the criteria of the financial test and that alternate assurance has been obtained.

(f). The administrative authority, based on a reasonable belief that the local government affected person may no longer meet the requirements of the local government financial test, may require additional reports of financial condition from the local government at any time. If the administrative authority finds, on the basis of such reports or other information, that the affected person no longer meets the local government financial test, the local government must provide alternate financial assurance in accordance with this Section.

iv. Calculation of Costs to be Assured. The portion of the closure and corrective action costs that a local government affected person can assure under Subparagraph E.2.i of this Section is determined as follows:

(a). if the local government affected person does not assure other environmental obligations through a financial test, it may assure closure and corrective action costs that equal up to 43 percent of the local government's total annual revenue; or

(b). if the local government assures other environmental obligations through a financial test, including those associated with underground injection control (UIC) facilities under 40 CFR 144.62, petroleum underground storage tank facilities under 40 CFR Part 280, PCB storage facilities under 40 CFR Part 761, or hazardous waste treatment, storage, and disposal facilities under 40 CFR Parts 264 and 265, or any applicable corresponding state program, it must add those costs to the closure and corrective action costs it seeks to assure under this Subparagraph, and the total that may be assured must not exceed 43 percent of the local government's total annual revenue; and

(c). the affected person must obtain an alternate financial assurance instrument for those costs that exceed the limits set in this Clause.

j. Local Government Guarantee. An affected person may demonstrate financial assurance for closure, as required by this Section, by obtaining a written guarantee provided by a local government. The guarantor must meet the requirements of the local government financial test in Subparagraph E.2.i of this Section, and must comply with the terms of a written guarantee.

i. **Terms of the Written Guarantee.** The guarantee must be effective before the initial receipt of sewage sludge, other material, feedstock, or supplements or before the effective date of this Section, whichever is later, in the case of closure. The guarantee must provide that:

(a). if the affected person fails to perform closure of a facility covered by the guarantee, the guarantor will:

(i). perform closure, or pay a third party to perform closure; or

(ii). establish a fully funded trust fund as specified in Subparagraph E.2.c of this Section in the name of the affected person; and

(b). the guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the affected person and to the Office of Environmental Services. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the affected person and the administrative authority, as evidenced by the return receipts. If a guarantee is canceled, the affected person must, within 90 days following receipt of the cancellation notice by the affected person and the administrative authority, obtain alternate financial assurance, place evidence of that alternate financial assurance in the facility operating record, and notify the Office of Environmental Services. If the affected person fails to provide alternate financial assurance within the 90-day period, then the guarantor must provide that alternate assurance within 120 days following the guarantor's notice of cancellation, place evidence of the alternate assurance in the facility operating record, and notify the Office of Environmental Services.

ii. **Recordkeeping and Reporting**

(a). The affected person must place a certified copy of the guarantee, along with the items required under Clause E.2.i.iii of this Section, into the facility's operating record before the initial receipt of sewage sludge, other material, feedstock, or supplements or before the effective date of this Section, whichever is later.

(b). The affected person is no longer required to maintain the items specified in Subclause E.2.j.ii.(a) of this Section when:

(i). the affected person substitutes alternate financial assurance as specified in this Section; or

(ii). the affected person is released from the requirement of maintaining financial assurance in accordance with this Section.

(c). If a local government guarantor no longer meets the requirements of Subparagraph E.2.i of this Section, the affected person must, within 90 days, obtain alternate assurance, place evidence of the alternate assurance in the facility operating record, and notify the Office of Environmental Services. If the affected person fails to obtain alternate financial assurance within that 90-day period, the guarantor must provide that alternate assurance within the next 30 days.

k. **Use of Multiple Instruments.** An affected person may demonstrate financial assurance for closure and corrective action, as required by this Section, by establishing more than one financial mechanism per facility, except that instruments guaranteeing performance, rather than payment, may not be combined with other instruments. The instruments must be as specified in Subparagraphs E.2.c-h of this Section, except that financial assurance for an amount at least equal to the current cost estimate for closure and/or corrective action may be provided by a combination of instruments, rather than a single mechanism.

l. **Discounting.** The administrative authority may allow discounting of closure cost estimates in this Subsection up to the rate of return for essentially risk-free investments, net of inflation, under the following conditions:

i. the administrative authority determines that cost estimates are complete and accurate and the affected person has submitted a statement from a registered professional engineer to the Office of Environmental Services so stating;

ii. the state finds the facility in compliance with applicable and appropriate permit conditions;

iii. the administrative authority determines that the closure date is certain and the affected person certifies that there are no foreseeable factors that will change the estimate of site life; and

iv. discounted cost estimates are adjusted annually to reflect inflation and years of remaining life.

F. Incapacity of Affected Persons, Guarantors, or Financial Institutions

1. All affected persons subject to this Section must notify the Office of Environmental Services by certified mail of the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the affected person as debtor, within 10 days after commencement of the proceeding. A guarantor of a corporate guarantee as specified in Subparagraph D.1.d or Clause E.2.h.ix of this Section must make such a notification if he is named as debtor, as required under the terms of the corporate guarantee set forth in LAC 33:IX.7395.Appendix J.

2. An affected person who fulfills the requirements of Subsection D or E of this Section by obtaining a trust fund, surety bond, letter of credit, or insurance policy will be deemed to be without the required financial assurance or liability coverage in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee or of the institution issuing the surety bond, letter of credit, or insurance policy to issue such instruments. The affected person must establish other financial assurance or liability coverage within 60 days after such an event.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(1)(c) and (B)(3)(e).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment,

Environmental Planning Division, LR 28:796 (April 2002), repromulgated LR 30:233 (February 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2516 (October 2005), LR 33:2386 (November 2007), LR 35:931 (May 2009).

§7309. Pathogens and Vector Attraction Reduction

A. Scope. This Section contains the following:

1. the requirements for a sewage sludge to be classified either as Exceptional Quality or Class B biosolids with respect to pathogens;
2. the site restrictions for land on which Class B biosolids are applied; and
3. the alternative vector attraction reduction requirements for biosolids that are applied to the land.

B. Special Definitions. In addition to the terms referenced and defined at LAC 33:IX.7301.B, the following definitions apply to this Section.

Aerobic Digestion—the biochemical decomposition of organic matter in sewage sludge into carbon dioxide and water by microorganisms in the presence of air.

Anaerobic Digestion—the biochemical decomposition of organic matter in sewage sludge into methane gas and carbon dioxide by microorganisms in the absence of air.

Density of Microorganisms—the number of microorganisms per unit mass of total solids (dry weight) in the sewage sludge.

Land with a High Potential for Public Exposure—land that the public uses frequently. This includes, but is not limited to, a public contact site and a reclamation site located in a populated area (e.g., a construction site located in a city).

Land with a Low Potential for Public Exposure—land that the public uses infrequently. This includes, but is not limited to, agricultural land, forest, and a reclamation site located in an unpopulated area (e.g., a strip mine located in a rural area).

Pathogenic Organisms—disease-causing organisms. These include, but are not limited to, certain bacteria, protozoa, viruses, and viable helminth ova.

pH—the logarithm of the reciprocal of the hydrogen ion concentration measured at 25°C or measured at another temperature and then converted to an equivalent value at 25°C.

Specific Oxygen Uptake Rate (SOUR)—the mass of oxygen consumed per unit time per unit mass of total solids (dry weight basis) in the sewage sludge.

Total Solids—the materials in sewage sludge that remain as residue when the sewage sludge is dried to a constant weight at 103° to 105°C.

Unstabilized Solids—organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Vector Attraction—the characteristic of sewage sludge that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.

Volatile Solids—the amount of the total solids in sewage sludge lost when the sewage sludge is combusted at 550°C in the presence of excess air.

C. Pathogens

1. Exceptional Quality Biosolids

a. The requirement in Subparagraph C.1.b of this Section, and the requirements in Subparagraph C.1.c, d, e, f, g, or h of this Section, must be met for biosolids classified as Exceptional Quality biosolids with respect to pathogens.

b. The Exceptional Quality biosolids pathogen requirements in Subparagraphs C.1.c-h of this Section must be met either prior to meeting or at the same time that the vector attraction reduction requirements in Subsection D of this Section, except the vector attraction reduction requirements in Subparagraphs D.2.d-e.ii of this Section, are met.

c. Exceptional Quality Biosolids—Alternative 1

i. Either the density of fecal coliform in the biosolids shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella sp.* bacteria in the biosolids shall be less than 3 Most Probable Number per 4 grams of total solids (dry weight basis) at the time the biosolids are used or disposed, at the time the biosolids are prepared for sale or to be given away in a bag or other container for application to the land, or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements of *Exceptional Quality biosolids*, as defined in LAC 33:IX.7301.B.

ii. The temperature of the sewage sludge that is used or disposed shall be maintained at a specific value for a period of time, as follows.

(a). When the percent solids of the sewage sludge is 7 percent or higher, the temperature of the sewage sludge shall be 50°C or higher, the time period shall be 20 minutes or longer, and the temperature and time period shall be determined using Equation (2), except when small particles of sewage sludge are heated by either warmed gases or an immiscible liquid.

$$D = \frac{131,700,000}{10^{0.1400 t}} \quad \text{Equation (2)}$$

where:

D = time in days
 t = temperature in degrees Celsius

(b). When the percent solids of the sewage sludge is 7 percent or higher and small particles of sewage sludge are heated by either warmed gases or an immiscible liquid, the temperature of the sewage sludge shall be 50°C or higher, the time period shall be 15 seconds or longer, and the temperature and time period shall be determined using Equation (2).

(c). When the percent solids of the sewage sludge is less than 7 percent and the time period is at least 15 seconds, but less than 30 minutes, the temperature and time period shall be determined using Equation (2).

(d). When the percent solids of the sewage sludge is less than 7 percent, the temperature of the sewage sludge is 50°C or higher, and the time period is 30 minutes or longer, the temperature and time period shall be determined using Equation (3).

$$D = \frac{50,070,000}{10^{0.1400t}} \quad \text{Equation (3)}$$

where:

D = time in days
 t = temperature in degrees Celsius

d. Exceptional Quality Biosolids—Alternative 2

i. Either the density of fecal coliform in the biosolids shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella sp.* bacteria in the biosolids shall be less than 3 Most Probable Number per 4 grams of total solids (dry weight basis) at the time the biosolids are used or disposed, at the time the biosolids are prepared for sale or to be given away in a bag or other container for application to the land, or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements of *Exceptional Quality biosolids*, as defined in LAC 33:IX.7301.B.

ii. pH and Temperature Standards

(a). The pH of the sewage sludge that is used or disposed shall be raised to above 12 and shall remain above 12 for 72 hours.

(b). The temperature of the sewage sludge shall be above 52°C for 12 hours or longer during the period that the pH of the sewage sludge is above 12.

(c). At the end of the 72-hour period during which the pH of the sewage sludge is above 12, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50 percent.

e. Exceptional Quality Biosolids—Alternative 3

i. Either the density of fecal coliform in the biosolids shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella sp.* bacteria in the biosolids shall be less than 3

Most Probable Number per 4 grams of total solids (dry weight basis) at the time the biosolids are used or disposed, at the time the biosolids are prepared for sale or to be given away in a bag or other container for application to the land, or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements of *Exceptional Quality biosolids*, as defined in LAC 33:IX.7301.B.

ii. The sewage sludge shall be analyzed prior to pathogen treatment to determine whether the sewage sludge contains enteric viruses.

(a). When the density of enteric viruses in the sewage sludge prior to pathogen treatment is less than 1 Plaque-forming Unit per 4 grams of total solids (dry weight basis), the sewage sludge is *Exceptional Quality biosolids* with respect to enteric viruses until the next monitoring episode for the sewage sludge.

(b). When the density of enteric viruses in the sewage sludge prior to pathogen treatment is equal to or greater than 1 Plaque-forming Unit per 4 grams of total solids (dry weight basis), the sewage sludge is *Exceptional Quality biosolids* with respect to enteric viruses when the density of enteric viruses in the sewage sludge after pathogen treatment is less than 1 Plaque-forming Unit per 4 grams of total solids (dry weight basis) and when the values or ranges of values for the operating parameters for the pathogen treatment process that produces the sewage sludge that meets the enteric virus density requirement are documented.

(c). After the enteric virus reduction in Subclause C.1.e.ii.(b) of this Section is demonstrated for the pathogen treatment process, the sewage sludge continues to be *Exceptional Quality biosolids* with respect to enteric viruses when the values for the pathogen treatment process operating parameters are consistent with the values or ranges of values documented in Subclause C.1.e.ii.(b) of this Section.

iii. The sewage sludge shall be analyzed prior to pathogen treatment to determine whether the sewage sludge contains viable helminth ova.

(a). When the density of viable helminth ova in the sewage sludge prior to pathogen treatment is less than 1 per 4 grams of total solids (dry weight basis), the sewage sludge is *Exceptional Quality biosolids* with respect to viable helminth ova until the next monitoring episode for the sewage sludge.

(b). When the density of viable helminth ova in the sewage sludge prior to pathogen treatment is equal to or greater than 1 per 4 grams of total solids (dry weight basis), the sewage sludge is *Exceptional Quality biosolids* with respect to viable helminth ova when the density of viable helminth ova in the sewage sludge after pathogen treatment is less than 1 per 4 grams of total solids (dry weight basis) and when the values or ranges of values for the operating parameters for the pathogen treatment process that produces

the sewage sludge that meets the viable helminth ova density requirement are documented.

(c). After the viable helminth ova reduction in Subclause C.1.e.iii.(b) of this Section is demonstrated for the pathogen treatment process, the sewage sludge continues to be Exceptional Quality biosolids with respect to viable helminth ova when the values for the pathogen treatment process operating parameters are consistent with the values or ranges of values documented in Subclause C.1.e.iii.(b) of this Section.

f. Exceptional Quality Biosolids—Alternative 4

i. Either the density of fecal coliform in the biosolids shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella sp.* bacteria in the biosolids shall be less than 3 Most Probable Number per 4 grams of total solids (dry weight basis) at the time the biosolids are used or disposed, at the time the biosolids are prepared for sale or to be given away in a bag or other container for application to the land, or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements of *Exceptional Quality biosolids*, as defined in LAC 33:IX.7301.B.

ii. The density of enteric viruses in the biosolids shall be less than 1 Plaque-forming Unit per 4 grams of total solids (dry weight basis) at the time the biosolids are used or disposed, at the time the biosolids are prepared for sale or to be given away in a bag or other container for application to the land, or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements of *Exceptional Quality biosolids* as defined in LAC 33:IX.7301.B.

iii. The density of viable helminth ova in the biosolids shall be less than 1 per 4 grams of total solids (dry weight basis) at the time the biosolids are used or disposed, at the time the biosolids are prepared for sale or to be given away in a bag or other container for application to the land, or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements of *Exceptional Quality biosolids*, as defined in LAC 33:IX.7301.B.

g. Exceptional Quality Biosolids—Alternative 5

i. Either the density of fecal coliform in the biosolids shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella sp.* bacteria in the biosolids shall be less than 3 Most Probable Number per 4 grams of total solids (dry weight basis) at the time the biosolids are used or disposed, at the time the biosolids are prepared for sale or to be given away in a bag or other container for application to the land, or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements of *Exceptional Quality biosolids*, as defined in LAC 33:IX.7301.B.

ii. Sewage sludge that is used or disposed shall be treated in one of the Processes to Further Reduce Pathogens described in LAC 33:IX.7399.B.

h. Exceptional Quality Biosolids—Alternative 6

i. Either the density of fecal coliform in the biosolids shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella sp.* bacteria in the biosolids shall be less than 3 Most Probable Number per 4 grams of total solids (dry weight basis) at the time the biosolids are used or disposed, at the time the biosolids are prepared for sale or to be given away in a bag or other container for application to the land, or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements of *Exceptional Quality biosolids*, as defined in LAC 33:IX.7301.B.

ii. Sewage sludge that is used or disposed shall be treated in a process that is equivalent to a Process to Further Reduce Pathogens that has been approved by the Environmental Protection Agency's (EPA's) Pathogen Equivalency Committee.

iii. Requests for approval of alternative innovative processes, as a process that is equivalent to a Process to Further Reduce Pathogens, that have not yet been approved by the EPA's Pathogen Equivalency Committee shall initially be submitted to the administrative authority. The administrative authority shall then work with the EPA's Pathogen Equivalency Committee on the proper procedures for EPA's review of the request.

2. Class B Biosolids

a. The requirements in Subparagraph C.2.b, c, or d of this Section must be met for biosolids classified as Class B biosolids with respect to pathogens. The site restrictions in Subparagraph C.2.e of this Section must be met when biosolids that meet the Class B biosolids pathogen requirements in Subparagraph C.2.b, c, or d of this Section are applied to the land.

b. Class B Biosolids—Alternative 1

i. Seven representative samples of the biosolids that are used or disposed shall be collected.

ii. The geometric mean of the density of fecal coliform in the samples required by Clause C.2.b.i of this Section shall be less than either 2,000,000 Most Probable Number per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

c. Class B Biosolids—Alternative 2. Biosolids that are used or disposed shall be treated in one of the Processes to Significantly Reduce Pathogens described in LAC 33:IX.7399.A.

d. Class B Biosolids—Alternative 3. Biosolids that are used or disposed shall be treated in a process that is equivalent to a Process to Significantly Reduce Pathogens that has been approved by the EPA's Pathogen Equivalency

Committee. Requests for approval of alternative innovative processes, as a process that is equivalent to a Process to Further Reduce Pathogens, that have not yet been approved by the EPA's Pathogen Equivalency Committee shall initially be submitted to the administrative authority. The administrative authority shall then work with the EPA's Pathogen Equivalency Committee on the proper procedures for EPA's review of the request.

e. Site Restrictions

i. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of biosolids.

ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of biosolids when the biosolids remain on the land surface for four months or longer prior to incorporation into the soil.

iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of biosolids when the biosolids remain on the land surface for less than four months prior to incorporation into the soil.

iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of biosolids.

v. Animals shall not be grazed on the land for 30 days after application of biosolids.

vi. Turf grown on land where biosolids are applied shall not be harvested for one year after application of the biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority.

vii. Public access to land with a high potential for public exposure shall be restricted for one year after application of biosolids, by means approved by the administrative authority.

viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of biosolids, by means approved by the administrative authority.

ix. Signs shall be posted at all entrances to the Class B biosolids land application site, having at the minimum the following content:

(a). the name of the land application site or facility;

(b). wording that indicates that the area is a biosolids land application site; and

(c). emergency contact telephone numbers.

D. Vector Attraction Reduction

1. Land Application Requirements

a. One of the vector attraction reduction requirements in Subparagraphs D.2.a-j of this Section shall

be met when bulk biosolids are applied to agricultural land, forest, a public contact site, or a reclamation site.

b. One of the vector attraction reduction requirements in Subparagraphs D.2.a-h of this Section shall be met when bulk biosolids are applied to a lawn or a home garden.

c. One of the vector attraction reduction requirements in Subparagraphs D.2.a-h of this Section shall be met when biosolids are sold or given away in a bag or other container for application to the land.

2. Procedures to Attain Vector Attraction Reduction for Land Application

a. Volatile Solids Reduction

i. The mass of volatile solids in the biosolids shall be reduced by a minimum of 38 percent (see calculation procedures in *Environmental Regulations and Technology—Control of Pathogens and Vector Attraction in Sewage Sludge*, EPA-625/R-92/013, 1992, U.S. Environmental Protection Agency, Cincinnati, Ohio 45268).

ii. When the 38 percent volatile solids reduction requirement in Clause D.2.a.i of this Section cannot be met for an anaerobically digested sewage sludge, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30° and 37°C. When, at the end of the 40 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 17 percent, vector attraction reduction is achieved.

iii. When the 38 percent volatile solids reduction requirement in Clause D.2.a.i of this Section cannot be met for an aerobically digested sewage sludge, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge that has a percent solids of 2 percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20°C. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 15 percent, vector attraction reduction is achieved.

b. Specific Oxygen Uptake Rate (SOUR). The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20°C.

c. Aerobic Treatment. Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40°C and the average temperature of the sewage sludge shall be higher than 45°C.

d. Alkaline Treatment. The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.

e. Percent Solids. In order to attain vector attraction reduction through percent solids, either of the following must be met:

i. the percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials; or

ii. the percent solids of sewage sludge that does contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials.

f. Injection of Biosolids

i. Biosolids shall be injected below the surface of the land.

ii. No significant amount of biosolids shall be present on the land surface within one hour after the biosolids are injected.

iii. When the biosolids that are injected below the surface of the land are Exceptional Quality biosolids with respect to pathogens, the biosolids shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

g. Incorporation of Biosolids

i. Biosolids applied to the land surface shall be incorporated into the soil within six hours after application to the land, unless otherwise specified by the permitting authority.

ii. When biosolids that are incorporated into the soil are Exceptional Quality biosolids with respect to pathogens, the biosolids shall be applied to the land within eight hours after being discharged from the pathogen treatment process.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(1)(c) and (B)(3)(e).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:806 (April 2002), repromulgated LR 30:233 (February 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2395 (November 2007), LR 35:941 (May 2009).

§7311. Incineration

A. Applicability

1. This Section applies to a person who fires only sewage sludge or sewage sludge and *auxiliary fuel*, as defined in Subsection B of this Section, in a sewage sludge incinerator; to a *sewage sludge incinerator*, as defined in Subsection B of this Section; and to sewage sludge or sewage sludge and auxiliary fuel fired in a sewage sludge incinerator.

2. This Section applies to the exit gas from a sewage sludge incinerator stack.

B. Special Definitions. All terms not defined below shall have the meaning given them in LAC 33:IX.7301.B and in LAC 33:III.111.

Air Pollution Control Device—one or more processes used to treat the exit gas from a sewage sludge incinerator stack.

Auxiliary Fuel—fuel used to augment the fuel value of sewage sludge. This includes, but is not limited to, natural gas, fuel oil, coal, gas generated during anaerobic digestion of sewage sludge, and municipal solid waste (not to exceed 30 percent of the dry weight of sewage sludge and auxiliary fuel together). Hazardous wastes are not auxiliary fuel.

Average Daily Concentration—the arithmetic mean of the concentration of a pollutant in milligrams per kilogram of sewage sludge (dry weight basis) in the samples collected and analyzed in a month.

Control Efficiency—the mass of a pollutant in the sewage sludge fed to an incinerator minus the mass of that pollutant in the exit gas from the incinerator stack divided by the mass of the pollutant in the sewage sludge fed to the incinerator.

Dispersion Factor—the ratio of the increase in the ground level ambient air concentration for a pollutant at or beyond the property line of the site where the sewage sludge incinerator is located to the mass emission rate for the pollutant from the incinerator stack.

Fluidized Bed Incinerator—an enclosed device in which organic matter and inorganic matter in sewage sludge are combusted in a bed of particles suspended in the combustion chamber gas.

Hourly Average—the arithmetic mean of all measurements, taken during an hour. At least two measurements must be taken during the hour.

Incineration—the combustion of organic matter and inorganic matter in sewage sludge by high temperatures in an enclosed device.

Incinerator Operating Combustion Temperature—the arithmetic mean of the temperature readings in the hottest zone of the furnace recorded in a day (24 hours) when the temperature is averaged and recorded at least hourly during the hours the incinerator operates in a day.

Monthly Average—the arithmetic mean of the hourly averages for the hours a sewage sludge incinerator operates during the month.

Performance Test Combustion Temperature—the arithmetic mean of the average combustion temperature in the hottest zone of the furnace for each of the runs in a performance test.

Risk Specific Concentration—the allowable increase in the average daily ground level ambient air concentration for a pollutant from the incineration of sewage sludge at or beyond the property line of the site where the sewage sludge incinerator is located.

Sewage Sludge Feed Rate—either the average daily amount of sewage sludge fired in all sewage sludge incinerators within the property line of the site where the sewage sludge incinerators are located for the number of days in a 365-day period that each sewage sludge incinerator operates, or the average daily design capacity for all sewage sludge incinerators within the property line of the site where the sewage sludge incinerators are located.

Sewage Sludge Incinerator—an enclosed device in which only sewage sludge or sewage sludge and auxiliary fuel are fired.

Stack Height—the difference between the elevation of the top of a sewage sludge incinerator stack and the elevation of the ground at the base of the stack when the difference is equal to or less than 214 feet (65 meters). When the difference is greater than 214 feet (65 meters), stack height is the creditable stack height determined in accordance with LAC 33:III.921.

Standard—a standard of performance proposed or promulgated under this Chapter.

Stationary Source—any building, structure, facility, or installation that emits or may emit any air pollutant.

Total Hydrocarbons—the organic compounds in the exit gas from a sewage sludge incinerator stack measured using a flame ionization detection instrument referenced to propane.

Wet Electrostatic Precipitator—an air pollution control device that uses both electrical forces and water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

Wet Scrubber—an air pollution control device that uses water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

C. General Requirements

1. No person shall fire sewage sludge or sewage sludge and auxiliary fuel in a sewage sludge incinerator except in compliance with the requirements in this Section.

2. Performance Tests for New Stationary Sources

a. Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of such facility and at such other times as may be required by the administrative authority, the owner or operator of such facility shall conduct performance test(s) and furnish the administrative authority a written report of the results of such performance test(s).

b. Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained for each applicable requirement in Subsections D, E, and F of this Section, unless the administrative authority:

- i. specifies or approves, in specific cases, the use of a reference method with minor changes in methodology;
- ii. approves the use of an equivalent method;

iii. approves the use of an alternative method the results of which have been determined by the administrative authority to be adequate for indicating whether a specific source is in compliance;

iv. waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means, to the administrative authority's satisfaction, that the affected facility is in compliance with the standard; or

v. approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this Subparagraph shall be construed to abrogate the administrative authority's right to require additional testing if deemed necessary for proper determination of the standard of performance of the new stationary source.

c. Performance tests shall be conducted under such conditions as the administrative authority shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the administrative authority such records as may be necessary to determine the conditions of the performance tests. Operations during periods of start-up, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of start-up, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

d. The owner or operator of an affected facility shall provide the administrative authority at least 30 days prior notice of any performance test, except as otherwise specified in this Subsection, to afford the administrative authority the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the owner or operator of an affected facility shall notify the administrative authority as soon as possible of any delay in the original test date either by providing at least seven days prior notice of the rescheduled date of the performance test or by arranging a rescheduled date with the administrative authority by mutual agreement.

e. The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

i. sampling ports adequate for test methods applicable to such facility, including:

(a). constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures; and

(b). providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures;

- ii. safe sampling platform(s);
- iii. safe access to sampling platform(s); and
- iv. utilities for sampling and testing equipment.

f. Unless otherwise specified in the applicable parts of this Paragraph, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the owner's or operator's control, compliance may, upon the administrative authority's approval, be determined using the arithmetic mean of the results of the two other runs.

3. In conducting the performance tests required in Paragraph C.2 of this Section, the owner or operator shall use as reference methods and procedures the test methods referenced in LAC 33:IX.7301.I or other methods and procedures as specified in this Section, except as provided for in Subparagraph C.2.b of this Section.

4. The owner or operator of any sewage sludge incinerator subject to the provisions of this Chapter shall conduct a performance test during which the monitoring and recording devices required under Paragraphs F.2, 4, and 6, Subparagraph F.8.a, and Paragraph F.9 of this Section are installed and operating and for which the sampling and analysis procedures required under Subparagraph G.1.d of this Section are performed as follows.

a. For incinerators that commenced construction or modification:

i. on or before April 18, 1986, the performance test shall be conducted within 360 days of the effective date of these regulations, unless the monitoring and recording devices required under Paragraphs F.2, 4, and 6, Subparagraph F.8.a, and Paragraph F.9 of this Section were installed and operating and the sampling and analysis procedures required under Subparagraph G.1.d of this Section were performed during the most recent performance test and a record of the measurements taken during the performance test is available for review by the administrative authority; and

ii. on or after the effective date of these regulations, the date of the performance test shall be determined by the requirements in Paragraph C.2 of this Section.

b. The owner or operator shall provide the administrative authority at least 30 days prior notice of the performance test to afford the administrative authority the opportunity to have an observer present.

5. The owner or operator of any sewage sludge incinerator, other than a multiple hearth, fluidized bed, or

electric incinerator or any sewage sludge incinerator equipped with a control device other than a wet scrubber, shall submit a plan to the administrative authority for approval for monitoring and recording incinerator and control device operation parameters. The plan shall be submitted to the administrative authority as follows:

a. no later than 90 days after October 6, 1988, for sources that have provided notification of commencement of construction prior to October 6, 1988;

b. no later than 90 days after the notification of commencement of construction, for sources that provide notification of commencement of construction on or after October 6, 1988; and

c. at least 90 days prior to the date on which the new control device becomes operative for sources switching to a control device other than a wet scrubber.

D. Pollutant Limits

1. Firing of sewage sludge in a sewage sludge incinerator shall not violate the requirements in the national emission standard for beryllium in Subpart C of 40 CFR Part 61 (as incorporated by reference at LAC 33:III.5116).

2. Firing of sewage sludge in a sewage sludge incinerator shall not violate the requirements in the national emission standard for mercury in Subpart E of 40 CFR Part 61 (as incorporated by reference at LAC 33:III.5116).

3. Pollutant Limit—Lead

a. The average daily concentration for lead in sewage sludge fed to a sewage sludge incinerator shall not exceed the concentration calculated using Equation (4).

$$C = \frac{0.1 \times \text{VAQS} \times 86,400}{DF \times (1 - \text{EF}) \times \text{F}} \quad \text{Equation (4)}$$

where:

- C = average daily concentration of lead in sewage sludge
- $NAAQS$ = National Ambient Air Quality Standard for lead in micrograms per cubic meter
- DF = dispersion factor in micrograms per cubic meter per gram per second
- CE = sewage sludge incinerator control efficiency for lead in hundredths
- SF = sewage sludge feed rate in metric tons per day (dry weight basis)

b. The dispersion factor (DF) in Equation (4) shall be determined from an air dispersion model in accordance with Paragraph D.5 of this Section.

i. When the sewage sludge stack height is 214 feet (65 meters) or less, the actual sewage sludge incinerator stack height shall be used in the air dispersion model to determine the dispersion factor (DF) for Equation (4).

ii. When the sewage sludge incinerator stack height exceeds 214 feet (65 meters), the creditable stack height shall be determined in accordance with LAC 33:III.921, and the creditable stack height shall be used in the air dispersion model to determine the dispersion factor (DF) for Equation (4).

c. The control efficiency (CE) for Equation (4) shall be determined from a performance test of the sewage sludge incinerator in accordance with Paragraph D.5 of this Section.

4. Pollutant Limit—Arsenic, Cadmium, Chromium, and Nickel

a. The average daily concentration for arsenic, cadmium, chromium, and nickel in sewage sludge fed to a sewage sludge incinerator each shall not exceed the concentration calculated using Equation (5).

$$C = \frac{RSC \times 86,400}{DF \times (1 - CE) \times SF} \quad \text{Equation (5)}$$

where:

- C = average daily concentration of arsenic, cadmium, chromium, or nickel in sewage sludge
- CE = sewage sludge incinerator control efficiency for arsenic, cadmium, chromium, or nickel in hundredths
- DF = dispersion factor in micrograms per cubic meter per gram per second
- RSC = risk-specific concentration for arsenic, cadmium, chromium, or nickel in micrograms per cubic meter
- SF = sewage sludge feed rate in metric tons per day (dry weight basis)

b. The risk-specific concentrations for arsenic, cadmium, and nickel used in Equation (5) shall be obtained from Table 1 of LAC 33:IX.7311.D.

Table 1 of LAC 33:IX.7311.D	
Risk-Specific Concentration for Arsenic, Cadmium, and Nickel	
Pollutant	Risk-Specific Concentration (micrograms per cubic meter)
Arsenic	0.023
Cadmium	0.057
Nickel	2.0

c. The risk-specific concentration for chromium used in Equation (5) shall be obtained from Table 2 of LAC 33:IX.7311.D or shall be calculated using Equation (6).

Table 2 of LAC 33:IX.7311.D	
Risk-Specific Concentration For Chromium	
Type of Incinerator	Risk-Specific Concentration (micrograms per cubic meter)
Fluidized bed with wet scrubber	0.65
Fluidized bed with wet scrubber and wet electrostatic precipitator	0.23
Other types with wet scrubber	0.064
Other types with wet scrubber and wet electrostatic precipitator	0.016

$$RSC = \frac{0.0085}{r} \quad \text{Equation (6)}$$

where:

- RSC = risk-specific concentration for chromium in micrograms per cubic meter used in Equation (5)
- r = decimal fraction of the hexavalent chromium concentration in the total chromium concentration measured in the exit gas from the sewage sludge incinerator stack in hundredths

d. The dispersion factor (DF) in Equation (5) shall be determined from an air dispersion model in accordance with Paragraph D.5 of this Section.

i. When the sewage sludge incinerator stack height is equal to or less than 214 feet (65 meters), the actual sewage sludge incinerator stack height shall be used in the air dispersion model to determine the dispersion factor (DF) for Equation (5).

ii. When the sewage sludge incinerator stack height is greater than 214 feet (65 meters), the creditable stack height shall be determined in accordance with LAC 33:III.921 and the creditable stack height shall be used in the air dispersion model to determine the dispersion factor (DF) for Equation (5).

e. The control efficiency (CE) for Equation (5) shall be determined from a performance test of the sewage sludge incinerator in accordance with Paragraph D.5 of this Section.

5. Air Dispersion Modeling and Performance Testing

a. The air dispersion model used to determine the dispersion factor in Subparagraphs D.3.b and 4.d of this Section shall be appropriate for the geographical, physical, and population characteristics at the sewage sludge incinerator site. The performance test used to determine the control efficiencies in Subparagraphs D.3.c and 4.e of this Section shall be appropriate for the type of sewage sludge incinerator.

b. For air dispersion modeling initiated after September 3, 1999, the modeling results shall be submitted to the administrative authority 30 days after completion of the modeling. In addition to the modeling results, the submission shall include a description of the air dispersion model and the values used for the model parameters.

c. The following procedures, at a minimum, shall apply in conducting performance tests to determine the control efficiencies in Subparagraphs D.3.c and 4.e of this Section after September 3, 1999:

i. the performance test shall be conducted under representative sewage sludge incinerator conditions at the highest expected sewage sludge feed rate within the design capacity of the sewage sludge incinerator;

ii. the administrative authority shall be notified at least 30 days prior to any performance test so the administrative authority may have the opportunity to observe the test. The notice shall include a test protocol with incinerator operating conditions and a list of test methods to be used; and

iii. each performance test shall consist of three separate runs using the applicable test method. The control efficiency for a pollutant shall be the arithmetic mean of the control efficiencies for the pollutant from the three runs.

d. The pollutant limits in Paragraphs D.3 and 4 of this Section shall be submitted to the administrative authority no later than 30 days after completion of the air dispersion modeling and performance test.

e. Significant changes in geographic or physical characteristics at the incinerator site or in incinerator operating conditions require new air dispersion modeling or performance testing to determine a new dispersion factor or a new control efficiency that will be used to calculate revised pollutant limits.

6. Standards for Particulate Matter

a. No owner or operator of any sewage sludge incinerator subject to the provisions of this Section shall discharge or cause the discharge into the atmosphere of:

i. particulate matter at a rate in excess of 0.65 g/kg dry sewage sludge input (1.30 lb/ton dry sewage sludge input); and

ii. any gases that exhibit 20 percent opacity or greater.

b. The owner or operator of a sewage sludge incinerator shall determine compliance with the particulate

matter emission standards in Subparagraph D.6.a of this Section as follows:

i. the emission rate (E) of particulate matter for each run shall be computed using the following equation:

$$E = (C_s Q_{sd}) / KS$$

where:

E	= emission rate of particulate matter, g/kg (lb/ton) of dry sewage sludge input
C_s	= concentration of particulate matter, g/dscm (g/dscf)
Q_{sd}	= volumetric flow rate of effluent gas, dscm/hr (dscf/hr)
S	= charging rate of dry sewage sludge during the run, kg/hr (lb/hr)
K	= conversion factor, 1.0 g/g [4.409 lb ² /(g-ton)]

ii. Method 5 (40 CFR Part 60, Appendix A-3, incorporated by reference in LAC 33:III.3003) shall be used to determine the particulate matter concentration (C_s) and the volumetric flow rate (Q_{sd}) of the effluent gas. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf);

iii. the dry sewage sludge charging rate (S) for each run shall be computed using either of the following equations:

$$S = K_m S_m R_{dm} / \Theta$$

$$S = K_v S_v R_{dv} / \Theta$$

where:

S	= charging rate of dry sewage sludge, kg/hr (lb/hr)
S_m	= total mass of sewage sludge charged, kg (lb)
R_{dm}	= average mass of dry sewage sludge per unit mass of sludge charged, mg/mg (lb/lb)
Θ	= duration of run, in minutes
K_m	= conversion factor, 60 min/hr
S_v	= total volume of sewage sludge charged, m ³ (gal)
R_{dv}	= average mass of dry sewage sludge per unit volume of sewage charged, mg/Liter (lb/ft ³)
K_v	= conversion factor, 60 X 10 ⁻³ (liter-kg-min)/(m ³ -mg-hr) [8.021 (ft ³ -min)/(gal-hr)]

iv. the flow measuring device of Paragraph F.2 of this Section shall be used to determine the total mass (S_m) or volume (S_v) of sewage sludge charged to the incinerator during each run. If the flow measuring device is on a time rate basis, readings shall be taken and recorded at 5-minute intervals during the run and the total charge of sewage sludge shall be computed using the following equations, as applicable:

$$S_m = \sum_{i=1}^n Q_{mi} / \Theta_i$$

$$S_v = \sum_{i=1}^n Q_{vi} / \Theta_i$$

where:

- Q_{mi} = average mass flow rate calculated by averaging the flow rates at the beginning and end of each interval "i", kg/min (gal/min)
- Q_{vi} = average volume flow rate calculated by averaging the flow rates at the beginning and end of each interval "i", m³/min (gal/min)
- Θ_i = duration of interval "i", min

v. samples of the sewage sludge charged to the incinerator shall be collected in nonporous jars at the beginning of each run and at approximately 1-hour intervals thereafter until the test ends, and Part 2540, G. Total, Fixed, and Volatile Solids in Solid and Semisolid Samples (the test method indicated in LAC 33:IX.7301.1.2.g) shall be used to determine dry sewage sludge content of each sample (total solids residue), except that:

(a). evaporating dishes shall be ignited to at least 103°C rather than the 550°C specified in Step 3(a)(1);

(b). determination of volatile residue, Step 3(b) may be deleted;

(c). the quantity of dry sewage sludge per unit sewage sludge charged shall be determined in terms of mg/Liter (lb/ft³) or mg/mg (lb/lb); and

(d). the average dry sewage sludge content shall be the arithmetic average of all the samples taken during the run; and

vi. Method 9 (40 CFR 60, Appendix A-4, incorporated by reference in LAC 33:III.3003) shall be used to determine opacity.

E. Operational Standard—Total Hydrocarbons

1. The total hydrocarbons concentration in the exit gas from a sewage sludge incinerator shall be corrected for 0 percent moisture by multiplying the measured total hydrocarbons concentration by the correction factor calculated using Equation (7).

$$\text{Correction factor (percent moisture)} = \frac{1}{(1 - Y)} \quad \text{Equation (7)}$$

where:

- Y = decimal fraction of the percent moisture in the sewage sludge incinerator exit gas in hundredths

2. The total hydrocarbons concentration in the exit gas from a sewage sludge incinerator shall be corrected to 7

percent oxygen by multiplying the measured total hydrocarbons concentration by the correction factor calculated using Equation (8).

$$\text{Correction factor (oxygen)} = \frac{14}{(21 - Y)} \quad \text{Equation (8)}$$

where:

- Y = percent oxygen concentration in the sewage sludge incinerator stack exit gas (dry volume/dry volume)

3. The monthly average concentration for total hydrocarbons in the exit gas from a sewage sludge incinerator stack, corrected for 0 percent moisture using the correction factor from Equation (7) and to 7 percent oxygen using the correction factor from Equation (8), shall not exceed 100 parts per million on a volumetric basis when measured using the instrument required by Paragraph F.5 of this Section.

F. Management Practices

1. The owner or operator of a sewage sludge incinerator shall provide access to the sewage sludge charged so that a well-mixed representative grab sample of the sewage sludge can be obtained.

2. A flow measuring device that can be used to determine either the mass or volume of sewage sludge charged to the incinerator shall be installed, calibrated, maintained, and properly operated.

a. The flow measuring device shall be certified by the manufacturer to have an accuracy of ±5 percent over its operating range.

b. The flow measuring device shall be operated continuously and data recorded during all periods of operation of the incinerator, unless the administrative authority specifies otherwise.

3. A weighing device for determining the mass of any municipal solid waste charged to the incinerator when sewage sludge and municipal solid waste are incinerated together shall be installed, calibrated, maintained, and properly operated. The weighing device shall have an accuracy of ±5 percent over its operating range.

4. For incinerators equipped with a wet scrubbing device, a monitoring device that continuously measures and records the pressure drop of the gas flow through the wet scrubbing device shall be installed, calibrated, maintained, and properly operated.

a. Where a combination of wet scrubbers is used in series, the pressure drop of the gas flow through the combined system shall be continuously monitored.

b. The device used to monitor scrubber pressure drop shall be certified by the manufacturer to be accurate within ±250 pascals (±1 inch water gauge) and shall be

calibrated on an annual basis in accordance with the manufacturer's instructions.

5. An instrument that continuously measures and records the total hydrocarbons concentration in the sewage sludge incinerator stack exit gas shall be installed, calibrated, operated, and maintained for a sewage sludge incinerator. The total hydrocarbons instrument shall employ a flame ionization detector, have a heated sampling line maintained at a temperature of 150°C or higher at all times, and be calibrated at least once every 24-hour operating period using propane.

6. An instrument that continuously measures and records the oxygen concentration in the sewage sludge incinerator stack exit gas shall be installed, calibrated, operated, and maintained for a sewage sludge incinerator.

a. The oxygen monitoring device shall be located upstream of any rabble shaft cooling air inlet into the incinerator exhaust gas stream, fan, ambient air recirculation damper, or any other source of dilution air.

b. The oxygen monitoring device shall be certified by the manufacturer to have a relative accuracy of ± 5 percent over its operating range and shall be calibrated according to method(s) prescribed by the manufacturer at least once each 24-hour operating period.

7. An instrument that continuously measures and records information used to determine the moisture content in the sewage sludge incinerator stack exit gas shall be installed, calibrated, operated, and maintained for a sewage sludge incinerator.

8. An instrument that continuously records combustion temperature at every hearth in multiple hearth furnaces, in the bed and outlet of fluidized bed incinerators, and in the drying, combustion, and cooling zones of electric incinerators shall be installed, calibrated, maintained, and properly operated.

a. For multiple hearth furnaces, a minimum of one thermocouple shall be installed in each hearth in the cooling and drying zones, and a minimum of two thermocouples shall be installed in each hearth in the combustion zone.

b. For electric incinerators, a minimum of one thermocouple shall be installed in the drying zone and one in the cooling zone, and a minimum of two thermocouples shall be installed in the combustion zone.

c. Each temperature measuring device shall be certified by the manufacturer to have an accuracy of ± 5 percent over its operating range.

d. Operation of a sewage sludge incinerator shall not cause the operating combustion temperature for the sewage sludge incinerator to exceed the performance test combustion temperature by more than 20 percent.

9. A device for measuring the fuel flow to the incinerator shall be installed, calibrated, maintained, and properly operated.

a. The fuel flow measuring device shall be certified by the manufacturer to have an accuracy of ± 5 percent over its operating range.

b. The fuel flow measuring device shall be operated continuously and data recorded during all periods of operation of the incinerator, unless the administrative authority specifies otherwise.

10. An air pollution control device shall:

a. be appropriate for the type of sewage sludge incinerator, and the operating parameters for the air pollution control device shall be adequate to indicate proper performance of the air pollution control device; and

b. be operated so as not to cause a significant exceedance of the average value for the air pollution control device operating parameters from the performance test required by Subparagraphs D.3.c and 4.e of this Section, nor shall the operation of the air pollution control device violate any other requirements of this Section to which the air pollution control device is subjected.

11. The permittee shall collect and analyze sewage sludge fed to a sewage sludge incinerator for dry sludge content and volatile solids content using the method specified at Clause D.6.b.v of this Section, except that the determination of volatile solids, Step (3)(b) of the method, shall not be deleted.

12. Sewage sludge shall not be fired in a sewage sludge incinerator if it is likely to adversely affect a threatened or endangered species listed under Section 4 of the Endangered Species Act, or its designated critical habitat.

13. The instruments required in Paragraphs F.2-9 of this Section shall be appropriate for the type of sewage sludge incinerator.

14. The administrative authority may exempt the owner or operator of any multiple hearth, fluidized bed, or electric sewage sludge incinerator from the daily sampling and analysis of sludge feed requirements in Paragraph F.11 and Subparagraph G.1.d of this Section and from the recordkeeping requirement in Subparagraph H.2.p of this Section for the volatile solids content, only, of the sewage sludge charged to the incinerator during all periods of this incinerator following the performance test if:

a. the particulate matter emission rate measured during the performance test required under Paragraph C.4 of this Section is less than or equal to 0.38 g/kg of dry sewage sludge input (0.75 lb/ton); and

b. the administrative authority determines that the requirements will not be necessary to evaluate the effects upon the environment and human health resulting from the emissions from the sewage sludge incinerator.

G. Frequency of Monitoring. Except as specified otherwise in this Section, the frequency of monitoring shall be as follows.

1. Sewage Sludge

a. The frequency of monitoring for beryllium shall be as required in Subpart C of 40 CFR Part 61 (as incorporated by reference in LAC 33:III.5116), and for mercury as required in Subpart E of 40 CFR Part 61 (as incorporated by reference in LAC 33:III.5116).

b. The frequency of monitoring for arsenic, cadmium, chromium, lead, and nickel in sewage sludge fed to a sewage sludge incinerator shall be the frequency in Table 1 of LAC 33:IX.7311.G.

Table 1 of LAC 33:IX.7311.G	
Frequency of Monitoring—Incineration	
Amount of Sewage Sludge¹ (metric tons per 365-day period)	Frequency
Greater than zero but less than 290	Once per year
Equal to or greater than 290 but less than 1,500	Once per quarter (4 times per year)
Equal to or greater than 1,500 but less than 15,000	Once per 60 days (6 times per year)
Equal to or greater than 15,000	Once per month (12 times per year)
¹ Amount of sewage sludge fired in a sewage sludge incinerator (dry weight basis)	

c. After the sewage sludge has been monitored for two years at the frequency in Table 1 of LAC 33:IX.7311.G, the administrative authority may reduce the frequency of monitoring for arsenic, cadmium, chromium, lead, and nickel.

d. The frequency of monitoring for dry sewage sludge content and volatile solids content of the sewage sludge shall be once per day, as a grab sample of the sewage sludge fed to the incinerator.

2. Total Hydrocarbons, Oxygen Concentration, Moisture Content, and Combustion Temperatures. The total hydrocarbons concentration and oxygen concentration in the exit gas from a sewage sludge incinerator stack, the information used to measure moisture content in the exit gas, and the combustion temperatures for the sewage sludge incinerator shall be monitored continuously.

3. Air Pollution Control Device Operating Parameters. Unless specified otherwise in this Chapter, the frequency of monitoring for the appropriate air pollution control device operating parameters shall be daily.

4. The frequency of monitoring shall be as specified in this Section for any performance testing or other sampling requirements not covered above. If the frequency of monitoring is not specified, then the frequency of monitoring shall be as specified by the administrative authority.

H. Recordkeeping

1. If the owner/operator of a sewage sludge incinerator is the person who prepares sewage sludge, the owner/operator of the sewage sludge incinerator shall keep a record of the annual production of sewage sludge (i.e., dry ton or dry metric tons) and of the sewage sludge management practice used and retain such record for a period of five years.

2. The owner/operator of a sewage sludge incinerator shall develop the following information and shall retain this information for five years:

a. the concentration of lead, arsenic, cadmium, chromium, and nickel in the sewage sludge fed to the sewage sludge incinerator;

b. the total hydrocarbons concentrations in the exit gas from the sewage sludge incinerator stack;

c. information that indicates the requirements in the national emission standard for beryllium in Subpart C of 40 CFR Part 61 (as incorporated by reference at LAC 33:III.5116) are met;

d. information that indicates the requirements in the national emission standard for mercury in Subpart E of 40 CFR Part 61 (as incorporated by reference at LAC 33:III.5116) are met;

e. the operating combustion temperatures for the sewage sludge incinerator;

f. values for the air pollution control device operating parameters;

g. the oxygen concentration and information used to measure moisture content in the exit gas from the sewage sludge incinerator stack;

h. the sewage sludge feed rate;

i. the stack height for the sewage sludge incinerator;

j. the dispersion factor for the site where the sewage sludge incinerator is located;

k. the control efficiency for lead, arsenic, cadmium, chromium, and nickel for each sewage sludge incinerator;

l. the risk-specific concentration for chromium calculated using Equation (6), if applicable;

m. a calibration and maintenance log for the instruments used to measure the total hydrocarbons concentration and oxygen concentration in the exit gas from the sewage sludge incinerator stack, the information needed to determine moisture content in the exit gas, and the combustion temperatures;

n. results of the particulate matter testing required in Subparagraph D.6.b of this Section;

o. for incinerators equipped with a wet scrubbing device, a record of the measured pressure drop of the gas flow through the wet scrubbing device, as required by Paragraph F.4 of this Section;

p. a record of the rate of sewage sludge fed to the incinerator, the fuel flow to the incinerator, and the total solids and volatile solids content of the sewage sludge charged to the incinerator; and

q. results of all applicable performance tests required in this Section.

I. Reporting

1. If the owner/operator of a sewage sludge incinerator is the person who prepares the sewage sludge, the owner/operator shall submit the information in Paragraph H.1 of this Section to the administrative authority on February 19 of each year.

2. The owner/operator of a sewage sludge incinerator shall submit the information in Subparagraphs H.2.a-q of this Section to the administrative authority on February 19 of each year.

3. In addition to the reporting requirements in Paragraphs I.1 and 2 of this Section, the owner/operator of any multiple hearth, fluidized bed, or electric sewage sludge incinerator subject to the provisions of this Chapter shall submit to the administrative authority on February 19 and August 19 of each year (semiannually) a report in writing that contains the following:

a. a record of average scrubber pressure drop measurements for each period of 15 minutes duration or more during which the pressure drop of the scrubber was less than, by a percentage specified below, the average scrubber pressure drop measured during the most recent performance test. The percent reduction in scrubber pressure drop for which a report is required shall be determined as follows:

i. for incinerators that achieved an average particulate matter emission rate of 0.38 kg/mg (0.75 lb/ton) dry sewage sludge input or less during the most recent performance test, a scrubber pressure drop reduction of more than 30 percent from the average scrubber pressure drop recorded during the most recent performance test shall be reported; and

ii. for incinerators that achieved an average particulate matter emission rate of greater than 0.38 kg/mg (0.75 lb/ton) dry sewage sludge input during the most recent performance test, a percent reduction in pressure drop greater than that calculated according to the following equation shall be reported:

$$P = -11E + 2.15$$

where:

P = percent reduction in pressure drop
 E = average particulate matter emissions (kg/megagram)

b. a record of average oxygen content in the incinerator exhaust gas for each period of 1-hour duration or more that the oxygen content of the incinerator exhaust gas exceeds the average oxygen content measured during the most recent performance test by more than 3 percent.

4. The owner or operator of any multiple hearth, fluidized bed, or electric sewage sludge incinerator from which the average particulate matter emission rate measured during the performance test required at Paragraph C.4 of this Section exceeds 0.38 g/kg of dry sewage sludge input (0.75 lb/ton of dry sewage sludge input) shall include in the report

for each calendar day that a decrease in scrubber pressure drop or increase in oxygen content of exhaust gas is reported, a record of the following:

a. scrubber pressure drop averaged over each 1-hour incinerator operating period;

b. oxygen content in the incinerator exhaust averaged over each 1-hour incinerator operating period;

c. temperatures of every hearth in multiple hearth incinerators, the bed and outlet of fluidized bed incinerators, and the drying, combustion, and cooling zones of electric incinerators averaged over each 1-hour incinerator operating period;

d. rate of sewage sludge charged to the incinerator averaged over each 1-hour incinerator operating period;

e. incinerator fuel use averaged over each 8-hour incinerator operating period; and

f. moisture and volatile solids content of the daily grab sample of sewage sludge charged to the incinerator.

5. The owner or operator of any sewage sludge incinerator other than a multiple hearth, fluidized bed, or electric incinerator or any sewage sludge incinerator equipped with a control device other than a wet scrubber shall include in the semiannual report a record of control device operation measurements, as specified in the plan approved under Paragraph C.5 of this Section.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(1)(c) and (B)(3)(e).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:809 (April 2002), repromulgated LR 30:233 (February 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2399 (November 2007).

§7313. Standard Conditions Applicable to All Sewage Sludge and Biosolids Use or Disposal Permits

A. General Conditions

1. Incorporation of Provisions. In accordance with the provisions of this Chapter all Sewage Sludge and Biosolids Use or Disposal Permits shall incorporate either expressly or by reference all conditions and requirements applicable to the preparation and use or disposal of sewage sludge set forth in the Louisiana Environmental Quality Act, as amended, as well as all applicable regulations.

2. Duty to Comply. The permittee must comply with all conditions of an issued final permit. Any permit noncompliance constitutes a violation of the Louisiana Environmental Quality Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

3. Enforcement Actions

a. The department may take enforcement action as prescribed by state law or regulation against any person who:

i. fails to submit a permit application as required by law;

ii. knowingly makes any false statement, representation, or certification in any application, record, report, or other document filed with the department pursuant to the Act or these regulations. Violations of this provision may subject the violator to the penalties provided for in the Act for perjury or false statements;

iii. fails to correct deficiencies in the permit application, or upon becoming aware that any relevant facts or information were omitted in a permit application or in any report to the department, fails to promptly submit such facts or information;

iv. fails to take any necessary action to complete the permit issuance, such as payment of fees or publication of required notices; or

v. fails to comply with any condition of the permit.

b. In cases where an application for a Sewage Sludge and Biosolids Use or Disposal Permit is withdrawn by the applicant, a written notification shall be provided to the Office of Environmental Services stating that no sewage sludge use or disposal practice or other activity that would require a permit from the Office of Environmental Services is currently taking place. Provided that the application was not made in response to previous enforcement action, the applicant is then exempt from enforcement action for causes listed under this Paragraph.

4. Toxic Pollutants

a. If any sewage sludge use or disposal standard or prohibition is promulgated under this Chapter or Section 405 of the Clean Water Act for a pathogen or pollutant, or concerning vector attraction reduction, management practices, etc., and that standard or prohibition is more stringent than any applicable requirement in an existing permit, the administrative authority shall institute proceedings under these regulations to modify or revoke and reissue the permit to conform to the sewage sludge use or disposal standard or prohibition.

b. The permittee shall comply with sewage sludge use or disposal standards or prohibitions established under this Chapter within the time frame provided in the regulations that establish these standards or prohibitions, even if the permit has not been modified to incorporate the requirement.

5. **Duty to Reapply for an Individual Permit.** If the permittee wishes to continue an activity regulated by an existing permit after the expiration date of that permit, the permittee must apply for and obtain a new permit. The new application shall be submitted at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the administrative authority. (The administrative authority shall not grant permission for applications to be submitted later than the expiration date of the existing permit.) A permit that was issued in accordance

with these regulations and that has expired shall be administratively continued until such time as a decision on an application to continue an activity under the permit has been issued by the administrative authority, if the application was received by the department at least 180 days prior to the permit expiration.

6. **Permit Action.** The conditions set forth in LAC 33:IX.2903, 2905, 2907, 3105, and 6509 as causes for modification, revocation and reissuance, and termination of a permit shall apply to permits issued in accordance with these regulations.

7. **Property Rights.** The issuance of a permit does not convey any property rights of any sort, or any exclusive privilege.

8. **Duty to Provide Information.** The permittee shall furnish to the administrative authority, within a reasonable time, any information that the administrative authority requests to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. The permittee shall also furnish to the administrative authority, upon request, copies of records required to be kept by the permit.

9. **State Laws.** Nothing in the permit shall be construed to preclude the institution of any legal action, or to relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation.

10. **Severability.** If any provision of these regulations, or the application thereof, is held to be invalid, the remaining provisions of these regulations shall not be affected, so long as they can be given effect without the invalid provision. To this end, the provisions of these regulations are declared to be severable.

11. **Draft Permits.** The conditions set forth in LAC 33:IX.3107 for draft permits shall also pertain to permits issued in accordance with these regulations.

12. **Fact Sheet.** A fact sheet shall be prepared for each draft permit issued in accordance with these regulations. The contents of the fact sheet shall include, but not be limited to, the following:

- a. the name of the applicant;
- b. the name of the facility;
- c. the address of the facility;
- d. the physical location of all facilities that are utilized to prepare sewage sludge or biosolids;
- e. the physical location of all land application sites;
- f. general and management practices;
- g. soil and site restrictions;
- h. monitoring, sampling and analysis, and reporting requirements; and
- i. all other information that is pertinent to the facility and to the permitting process.

13. Public Notice of Permit Actions and Public Comment Period. The conditions set forth in LAC 33:IX.3113 and 6521 for public notices and the public comment period shall apply to all permits issued in accordance with these regulations.

14. Public Comments and Requests for Public Hearings. The conditions set forth in LAC 33:I.1505 and IX.3115 for public comments and requests for public hearings shall apply to all permits issued in accordance with these regulations.

15. Public Hearings. The conditions set forth in LAC 33:IX.3117 for public hearings shall apply to all permits issued in accordance with these regulations.

16. Obligations to Raise Issues and Provide Information during the Public Comment Period. The conditions set forth in LAC 33:IX.3119 for the obligations to raise issues and provide information during the public comment period shall apply to all permits issued in accordance with these regulations.

17. Reopening of the Public Comment Period. The conditions set forth in LAC 33:IX.3121 for reopening of the public comment period shall apply to all permits issued in accordance with these regulations.

18. Issuance of a Final Permit Decision. After the close of the public comment period under Paragraph A.13 of this Section for a draft permit, the administrative authority shall issue a final permit decision. The administrative authority shall notify the applicant and each person who has submitted written comments or requested notice of the final permit decision. This notice shall include reference to the procedures for appealing a decision on a Sewage Sludge and Biosolids Use or Disposal Permit. For the purposes of this Section a *final permit decision* means a final decision to issue, deny, modify, revoke and reissue, or terminate a permit.

19. Response to Comments. The conditions set forth in LAC 33:IX.3125 for responding to comments shall apply to all permits issued in accordance with these regulations.

B. Proper Operation and Maintenance

1. Need to Halt or Reduce Not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

2. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any sewage sludge use or disposal practice in violation of the permit that has a reasonable likelihood of adversely affecting human health or the environment. The permittee shall also take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with the permit, including putting into effect such accelerated or additional monitoring as is necessary to determine the nature and impact of the noncomplying practice.

3. Proper Operation and Maintenance

a. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance also includes employing adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

b. The permittee shall provide an adequate operating staff that is duly qualified to carry out operation and maintenance and other functions necessary to ensure compliance with the conditions of the permit.

C. Monitoring and Records

1. Inspection and Entry. The conditions set forth in LAC 33:IX.2701.I for inspection and entry shall apply to all permits issued in accordance with these regulations.

2. Additional Monitoring by the Permittee. If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under LAC 33:IX.7301.I or, unless otherwise specified in 40 CFR Part 503, as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted on the sludge reporting form specified by the administrative authority.

3. Laboratory Accreditation

a. LAC 33:I.Chapters 45-59 provide requirements for an accreditation program specifically applicable to commercial laboratories, wherever located, that provide chemical analyses, analytical results, or other test data to the department, by contract or by agreement, and the data is:

- i. submitted on behalf of any facility, as defined in R.S. 30:2004;
- ii. required as part of any permit application;
- iii. required by order of the department;
- iv. required to be included on any monitoring report submitted to the department;
- v. required to be submitted by a contractor; or
- vi. otherwise required by department regulations.

b. The department laboratory accreditation program is designed to ensure the accuracy, precision, and reliability of the data generated, as well as the use of department-approved methodologies in generation of that data. Laboratory data generated by commercial environmental laboratories that are not accredited under these regulations will not be accepted by the department. Retesting and re-analyses by an accredited commercial laboratory will be required. Where retesting is not possible, the data generated will be considered invalid and in violation of the Sewage Sludge and Biosolids Use or Disposal Permit.

c. The regulations and guidelines on the environmental laboratory accreditation program and a list of laboratories that have applied for accreditation are available on the department's website. Questions concerning the program may be directed to the Office of Environmental Assessment.

D. Reporting Requirements

1. Facility Changes. The permittee shall give notice to the Office of Environmental Services as soon as possible of any planned physical alterations or additions to the permitted facility.

2. Anticipated Noncompliance. The permittee shall give advance notice to the Office of Environmental Services of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.

3. Transfers. A permit is not transferable to any person except after notice to the Office of Environmental Services. The administrative authority may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Louisiana Environmental Quality Act. Except as provided in LAC 33:IX.2901.A, a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued, or a minor modification made to identify the new permittee and incorporate such other requirements as may be necessary under the Louisiana Environmental Quality Act.

4. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of a permit shall be submitted no later than 14 days following each schedule date.

5. Other Noncompliance. The permittee shall report all instances of noncompliance not reported under Paragraph D.4 of this Section at the time monitoring reports are submitted.

6. Other Information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the administrative authority, it shall promptly submit the omitted facts or correct information.

7. Signatory Requirements. All applications, reports, or information submitted to the administrative authority shall be signed and certified.

a. All permit applications shall be signed as follows:

i. for a corporation—by a responsible corporate officer. For the purposes of this Section, a *responsible corporate officer* means:

(a). a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or

decision-making functions for the corporation. These responsible corporate officers are presumed to have the authority to sign permit applications unless the corporation has notified the administrative authority to the contrary; or

(b). the manager of one or more manufacturing, production, or operating facilities, provided that the manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations and initiating and directing other comprehensive measures to ensure long term compliance with environmental laws and regulations; the manager has the authority to ensure that the necessary systems are established or actions are taken to gather complete and accurate information for permit application requirements; and the authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions rather than to specific individuals;

ii. for a partnership or sole proprietorship—by a general partner or the proprietor, respectively; or

iii. for a municipality or a state, federal, or other public agency—by either a principal executive officer or ranking elected official. For purposes of this Paragraph, a principal executive officer of a federal agency includes:

(a). the chief executive officer of the agency; or

(b). a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a regional administrator of EPA).

b. All reports required by permits, and submission of other information requested by the administrative authority, shall be signed by a person described in Subparagraph D.7.a of this Section, or by a duly authorized representative of that person. For the purposes of this Subparagraph, a person is a *duly authorized representative* only if:

i. his or her authorization has been made in writing by a person described in Subparagraph D.7.a of this Section;

ii. the authorization specifies either an individual or a position now having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or a position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. A duly authorized representative may thus be either a named individual or an individual occupying a named position; and

iii. the written authorization is submitted to the administrative authority.

c. Changes to Authorization. If an authorization under Subparagraph D.7.b of this Section is no longer

accurate because a different individual or position now has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Subparagraph D.7.b of this Section must be submitted to the administrative authority prior to, or together with, any reports, information, or applications to be signed by an authorized representative.

d. **Certification.** Any person signing a document under the provisions of Subparagraph D.7.a or b of this Section shall make the following certification.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

8. **Availability of Reports.** All recorded information concerning permits and permit applications under this Chapter (completed permit application forms, fact sheets, draft permits, or any public document) not classified as confidential information under R.S. 30:2030(A) and 2074(D) and designated as such in accordance with LAC 33:IX.2323.A and C and LAC 33:IX.6503 shall be made available to the public for inspection and copying during normal working hours in accordance with the Public Records Act, R.S. 44:1 et seq. Claims of confidentiality for the following will be denied:

- a. the name and address of any permit applicant or permittee;
- b. permit applications, permits, and effluent data; and
- c. information required by the Sewage Sludge and Biosolids Use or Disposal Permit application forms provided by the administrative authority. This includes information submitted on the forms themselves and any attachments used to supply information required by the forms.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(1)(c) and (B)(3)(e).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of the Secretary, Legal Affairs Division, LR 33:2406 (November 2007), amended LR 35:941 (May 2009).

Subchapter B. Appendices

§7395. Financial Assurances Documents—Appendices A, B, C, D, E, F, G, H, I, and J

[NOTE: Within this Section, *affected person* means a commercial preparer of sewage sludge or a commercial land applier of biosolids, as applicable.]

A. Appendix A—Liability Endorsement

[Insert, as applicable: "COMMERCIAL PREPARER OF SEWAGE SLUDGE" or "COMMERCIAL LAND APPLIER OF BIOSOLIDS"]

LIABILITY ENDORSEMENT

Secretary
Louisiana Department of Environmental Quality
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313
Attention: Office of Environmental Services

Dear Sir:

(A). This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering bodily injury and property damage in connection with [name of the insured, which must be the affected person or the operator. (Note: The operator will provide the liability-insurance documentation only when the affected person is a public governing body and the public governing body is not the operator.)] The insured's obligation to demonstrate financial assurance is required in accordance with *Louisiana Administrative Code* (LAC), Title 33, Part IX.7307.A. The coverage applies at [list site identification number, site name, facility name, facility permit number, and facility address] for sudden and accidental occurrences. The limits of liability are per occurrence, and annual aggregate, per site, exclusive of legal-defense costs.

(B). The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions of the policy inconsistent with Subclauses (1)-(5), below, are hereby amended to conform with Subclauses (1)-(5), below:

(1). Bankruptcy or insolvency of the insured shall not relieve the insurer of its obligations under the policy to which this endorsement is attached.

(2). The insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the insured for any such payment made by the insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in LAC 33:IX.7307.D.1.b-d.

(3). Whenever requested by the administrative authority, the insurer agrees to furnish to the administrative authority a signed duplicate original of the policy and all endorsements.

(4). Cancellation of this endorsement, whether by the insurer or the insured, will be effective only upon written notice and upon lapse of 60 days after a copy of such written notice is received by the administrative authority.

(5). Any other termination of this endorsement will be effective only upon written notice and upon lapse of 30 days after a copy of such written notice is received by the administrative authority.

(C). Attached is the endorsement which forms part of the policy [policy number] issued by [name of insurer], herein called the insurer, of [address of the insurer] to [name of the insured] of [address of the insured], this [date]. The effective date of said policy is [date].

(D). I hereby certify that the wording of this endorsement is identical to the wording specified in LAC 33:IX.7395.Appendix A, effective on the date first written above and that the insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states, and is admitted, authorized, or eligible to conduct insurance business in the State of Louisiana.

[Signature of authorized representative of insurer]
[Typed name of authorized representative of insurer]
[Title of authorized representative of insurer]
[Address of authorized representative of insurer]

B. Appendix B—Certificate of Insurance

[Insert, as applicable: "COMMERCIAL PREPARER OF SEWAGE SLUDGE" or "COMMERCIAL LAND APPLIER OF BIOSOLIDS"]

CERTIFICATE OF LIABILITY INSURANCE

Secretary
Louisiana Department of Environmental Quality
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

Attention: Office of Environmental Services

Dear Sir:

(A). [Name of insurer], the "insurer," of [address of insurer] hereby certifies that it has issued liability insurance covering bodily injury and property damage to [name of insured, which must be the affected person or the facility], the "insured," of [address of insured] in connection with the insured's obligation to demonstrate financial assurance under *Louisiana Administrative Code* (LAC), Title 33, Part IX.7307.A. The coverage applies at [list agency interest number(s), site name(s), facility name(s), facility permit number(s), and site address(es)] for sudden and accidental occurrences. The limits of liability are each occurrence and annual aggregate, per site, exclusive of legal-defense costs. The coverage is provided under policy number [policy number], issued on [date]. The effective date of said policy is [date].

(B). The insurer further certifies the following with respect to the insurance described in Paragraph (A):

(1). Bankruptcy or insolvency of the insured shall not relieve the insurer of its obligations under the policy.

(2). The insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the insured for any such payment made by the insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated, as specified in LAC 33:IX.7307.D.1.b – d.

(3). Whenever requested by the administrative authority, the insurer agrees to furnish to him a signed duplicate original of the policy and all endorsements.

(4). Cancellation of the insurance, whether by the insurer or the insured, will be effective only upon written notice and upon lapse of 60 days after a copy of such written notice is received by the administrative authority.

(5). Any other termination of the insurance will be effective only upon written notice and upon lapse of 30 days after a copy of such written notice is received by the administrative authority.

(C). I hereby certify that the wording of this certificate is identical to the wording specified in LAC 33:IX.7395.Appendix B, as such regulations were constituted on the date first written above, and that the insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states, and is admitted, authorized, or eligible to conduct insurance business in the State of Louisiana.

[Signature of authorized representative of insurer]
[Typed name of authorized representative of insurer]
[Title of authorized representative of insurer]
[Address of authorized representative of insurer]

C. Appendix C—Letter of Credit

[Insert, as applicable: "COMMERCIAL PREPARER OF SEWAGE SLUDGE" or "COMMERCIAL LAND APPLIER OF BIOSOLIDS"]

IRREVOCABLE LETTER OF CREDIT

Secretary

Louisiana Department of Environmental Quality
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

Attention: Office of Environmental Services

Dear Sir:

We hereby establish our Irrevocable Standby Letter of Credit No.[number] at the request and for the account of [affected person's name and address] for its [list site identification number(s), site name(s), facility name(s), and facility permit number(s)] at [location(s)], Louisiana, in favor of any governmental body, person, or other entity for any sum or sums up to the aggregate amount of U.S. dollars [amount] upon presentation of:

(A). A final judgment issued by a competent court of law in favor of a governmental body, person, or other entity and against [affected person's name] for sudden and accidental occurrences for claims arising out of injury to persons or property due to operations by the affected person at [site location(s)] as set forth in the *Louisiana Administrative Code* (LAC), Title 33, Part IX.7307.A.

(B). A sight draft bearing reference to the Letter of Credit No. [number] drawn by the governmental body, person, or other entity, in whose favor the judgment has been rendered as evidenced by documentary requirement in Paragraph (A).

The Letter of Credit is effective as of [date] and will expire on [date], but such expiration date will be automatically extended for a period of at least one year on the above expiration date [date] and on each successive expiration date thereafter, unless, at least 120 days before the then-current expiration date, we notify both the administrative authority and [name of affected person] by certified mail that we have decided not to extend this Letter of Credit beyond the then-current expiration date. In the event we give such notification, any unused portion of this Letter of Credit shall be available upon presentation of your sight draft for 120 days after the date of receipt by both the Department of Environmental Quality and [name of affected person] as shown on the signed return receipts.

Whenever this Letter of Credit is drawn under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of [name of affected person] in accordance with the administrative authority's instructions.

Except to the extent otherwise expressly agreed to, the Uniform Customs and Practice for Documentary Letters of Credit (1983), International Chamber of Commerce Publication No. 400, shall apply to this Letter of Credit.

We certify that the wording of this Letter of Credit is identical to the wording specified in LAC 33:IX.7395.Appendix C, effective on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution(s)]
[date]

D. Appendix D—Trust Agreement

[Insert, as applicable: "COMMERCIAL PREPARER OF SEWAGE SLUDGE" or "COMMERCIAL LAND APPLIER OF BIOSOLIDS"]

TRUST AGREEMENT/STANDBY TRUST AGREEMENT

This Trust Agreement (the "Agreement") is entered into as of [date] by and between [name of affected person], a [name of state] [insert "corporation," "partnership," "association," or "proprietorship"], the "Grantor," and [name of corporate

trustee], [insert "incorporated in the State of" or "a national bank" or "a state bank"], the "Trustee."

WHEREAS, the Department of Environmental Quality of the State of Louisiana, an agency of the State of Louisiana, has established certain regulations applicable to the Grantor, requiring that an affected person shall provide assurance that funds will be available when needed for closure of the facility;

WHEREAS, the Grantor has elected to establish a trust to provide all or part of such financial assurance for the facility identified herein;

WHEREAS, the Grantor, acting through its duly authorized officers, has selected [the Trustee] to be the trustee under this Agreement, and [the Trustee] is willing to act as trustee.

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

SECTION 1. DEFINITIONS

As used in this Agreement:

(a). The term "Grantor" means the affected person who enters into this Agreement and any successors or assigns of the Grantor.

(b). The term "Trustee" means the Trustee who enters into this Agreement and any successor trustee.

(c). The term "Secretary" means the Secretary of the Louisiana Department of Environmental Quality.

(d). The term "Administrative Authority" means the Secretary or a person designated by him to act therefor.

SECTION 2. IDENTIFICATION OF FACILITIES AND COST ESTIMATES

This Agreement pertains to the facilities and cost estimates identified on attached Schedule A. [On Schedule A, list the agency interest number, site name, facility name, facility permit number, and the annual aggregate amount of liability coverage or current closure cost estimates, or portions thereof, for which financial assurance is demonstrated by this Agreement.]

SECTION 3. ESTABLISHMENT OF FUND

The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of the Louisiana Department of Environmental Quality. The Grantor and the Trustee intend that no third party shall have access to the Fund, except as herein provided. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. [Note: Standby Trust Agreements need not be funded at the time of execution. In the case of Standby Trust Agreements, Schedule B should be blank except for a statement that the Agreement is not presently funded, but shall be funded by the financial assurance document used by the Grantor in accordance with the terms of that document.] Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, in trust, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the administrative authority.

SECTION 4. PAYMENT FOR CLOSURE OR LIABILITY COVERAGE

The Trustee shall make payments from the Fund as the administrative authority shall direct, in writing, to provide for the payment of the costs of [liability claims or closure care] of the facility covered by this Agreement. The Trustee shall reimburse the Grantor or other persons as specified by the

administrative authority from the Fund for [liability claims or closure] expenditures in such amounts as the administrative authority shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the administrative authority specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

SECTION 5. PAYMENTS COMPRISED BY THE FUND

Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee.

SECTION 6. TRUSTEE MANAGEMENT

The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of like character and with like aims, except that:

(a). Securities or other obligations of the Grantor, or any owner of the [facility or facilities] or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2.(a), shall not be acquired or held, unless they are securities or other obligations of the federal or a state government.

(b). The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the federal or state government; and

(c). The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

SECTION 7. COMMINGLING AND INVESTMENT

The Trustee is expressly authorized, at its discretion:

(a). To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b). To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, or underwritten, or one to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares at its discretion.

SECTION 8. EXPRESS POWERS OF TRUSTEE

Without in any way limiting the powers and discretion conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a). To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b). To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c). To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in

bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve Bank, but the books and records of the Trustee shall at all times show that all securities are part of the Fund;

(d). To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the federal or state government; and

(e). To compromise or otherwise adjust all claims in favor of, or against, the Fund.

SECTION 9. TAXES AND EXPENSES

All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and other proper charges and disbursements of the Trustee, shall be paid from the Fund.

SECTION 10. ANNUAL VALUATION

The Trustee shall annually, at least 30 days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the administrative authority a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee, within 90 days after the statement has been furnished to the Grantor and the administrative authority, shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

SECTION 11. ADVICE OF COUNSEL

The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any questions arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

SECTION 12. TRUSTEE COMPENSATION

The Trustee shall be entitled to reasonable compensation for its services, as agreed upon in writing from time to time with the Grantor.

SECTION 13. SUCCESSOR TRUSTEE

The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for

instructions. The successor trustee shall, in writing, specify to the Grantor, the administrative authority, and the present Trustee by certified mail, 10 days before such change becomes effective, the date on which it assumes administration of the trust. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

SECTION 14. INSTRUCTIONS TO THE TRUSTEE

All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by the persons designated in the attached Exhibit A or such other persons as the Grantor may designate by amendment to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the administrative authority to the Trustee shall be in writing and signed by the administrative authority. The Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or termination of the authority of any person to act on behalf of the Grantor or administrative authority hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or administrative authority, except as provided for herein.

SECTION 15. NOTICE OF NONPAYMENT

The Trustee shall notify the Grantor and the administrative authority, by certified mail, within 10 days following the expiration of the 30-day period after the anniversary of the establishment of the Trust, if no payment is received from the Grantor during that period. After the pay-in period is completed, the Trustee shall not be required to send a notice of nonpayment.

SECTION 16. AMENDMENT OF AGREEMENT

This Agreement may be amended by an instrument, in writing, executed by the Grantor, the Trustee, and the administrative authority, or by the Trustee and the administrative authority, if the Grantor ceases to exist.

SECTION 17. IRREVOCABILITY AND TERMINATION

Subject to the right of the parties to amend this Agreement, as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the administrative authority, or by the Trustee and the administrative authority, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

SECTION 18. IMMUNITY AND INDEMNIFICATION

The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any direction by the Grantor or the administrative authority issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all reasonable expenses incurred in its defense in the event that the Grantor fails to provide such defense.

SECTION 19. CHOICE OF LAW

This Agreement shall be administered, construed, and enforced according to the laws of the State of Louisiana.

SECTION 20. INTERPRETATION

As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The

descriptive headings for each Section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their respective officers duly authorized [and their corporate seals to be hereunto affixed] and attested to as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in *Louisiana Administrative Code* (LAC), Title 33, Part IX.7395.Appendix D, on the date first written above.

WITNESSES:

GRANTOR:

By: _____
Its: _____
[Seal]

TRUSTEE:

By: _____
Its: _____
[Seal]

THUS DONE AND PASSED in my office in _____, on the _____ day of _____, 20_____, in the presence of _____ and _____, competent witnesses, who hereunto sign their names with the said appearers and me, Notary, after reading the whole.

Notary Public

(The following is an example of the certification of acknowledgement that must accompany the trust agreement.)

STATE OF LOUISIANA
PARISH OF _____

BE IT KNOWN, that on this _____ day of _____, 20_____, before me, the undersigned Notary Public, duly commissioned and qualified within the State and Parish aforesaid, and in the presence of the witnesses hereinafter named and undersigned, personally came and appeared _____, to me well known, who declared and acknowledged that he had signed and executed the foregoing instrument as his act and deed, and as the act and deed of the _____, a corporation, for the consideration, uses, and purposes and on terms and conditions therein set forth.

And the said appearer, being by me first duly sworn, did depose and say that he is the _____ of said corporation and that he signed and executed said instrument in his said capacity, and under authority of the Board of Directors of said corporation.

Thus done and passed in the State and Parish aforesaid, on the day and date first hereinabove written, and in the presence of _____ and _____, competent witnesses, who have hereunto subscribed their name as such, together with said appearer and me, said authority, after due reading of the whole.

WITNESSES:

NOTARY PUBLIC

E. Appendix E—Surety Bond

[Insert, as applicable: "COMMERCIAL PREPARER OF SEWAGE SLUDGE" or "COMMERCIAL LAND APPLIER OF BIOSOLIDS"]

FINANCIAL GUARANTEE BOND

Date bond was executed: _____

Effective date: _____

Principal: [legal name and business address of affected person]

Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"]

State of incorporation: _____

Surety: [name and business address]

[agency interest number, site name, facility name, facility permit number, and current closure amount(s) for each facility guaranteed by this bond]

Total penal sum of bond: \$ _____

Surety's bond number: _____

Know All Persons By These Presents, That we, the Principal and Surety hereto, are firmly bound to the Louisiana Department of Environmental Quality in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where Sureties are corporations acting as cosureties, we the sureties bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit or liability is indicated, the limit of liability shall be the full amount of the penal sum.

WHEREAS, said Principal is required, under the Louisiana Environmental Quality Act, R.S. 30:2001 et seq., and specifically Section 2074(B)(4), to have a permit in order to own or operate the [insert type of permitted operation] identified above; and

WHEREAS, the Principal is required by law to provide financial assurance for closure, as a condition of the permit; and

WHEREAS, said Principal shall establish a standby trust fund as is required by the *Louisiana Administrative Code* (LAC), Title 33, Part IX.7307.E.2.d.ii, when a surety bond is used to provide such financial assurance;

NOW THEREFORE, the conditions of the obligation are such that if the Principal shall faithfully, before the beginning of final closure of the facility identified above, fund the standby trust fund in the amount(s) identified above for the facility,

OR, if the Principal shall fund the standby trust fund in such amount(s) within 15 days after an order to close is issued by the administrative authority or a court of competent jurisdiction,

OR, if the Principal shall provide alternate financial assurance as specified in LAC 33:IX.7307.D or E and obtain written approval from the administrative authority of such assurance, within 90 days after the date of notice of cancellation is received by both the Principal and the administrative authority from the Surety,

THEN, this obligation shall be null and void; otherwise it is to remain in full force and effect.

The Surety shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by the administrative authority that the Principal has failed to perform as guaranteed by this bond, the Surety shall place funds in the amount guaranteed for the facility into the standby trust fund as directed by the administrative authority.

The Surety hereby waives notification or amendments to closure plans, permits, applicable laws, statutes, rules, and

regulations, and agrees that no such amendment shall in any way alleviate its obligation on this bond.

The liability of the Surety shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety hereunder exceed the amount of the penal sum.

The Surety may cancel the bond by sending notice of cancellation by certified mail to the Principal and to the administrative authority. Cancellation shall not occur before 120 days have elapsed beginning on the date that both the Principal and the administrative authority received the notice of cancellation, as evidenced by the return receipts.

The Principal may terminate this bond by sending written notice to the Surety and to the administrative authority, provided, however, that no such notice shall become effective until the Surety has received written authorization for termination of the bond by the administrative authority.

The Principal and Surety hereby agree to adjust the penal sum of the bond yearly in accordance with LAC 33:IX.7307.E.2.d.vi and the conditions of the permit so that it guarantees a new closure amount, provided that the penal sum does not increase or decrease without the written permission of the administrative authority.

The Principal and Surety hereby agree that no portion of the penal sum may be expended without prior written approval of the administrative authority.

IN WITNESS WHEREOF, the Principal and the Surety have executed this FINANCIAL GUARANTEE BOND and have affixed their seals on the date set forth above.

Those persons whose signatures appear below hereby certify that they are authorized to execute this FINANCIAL GUARANTEE BOND on behalf of the Principal and Surety, that each Surety hereto is authorized to do business in the State of Louisiana, and that the wording of this surety bond is identical to the wording specified in LAC 33:IX.7395.Appendix E, effective on the date this bond was executed.

PRINCIPAL

[Signature(s)]
[Name(s)]
[Title(s)]
[Corporate Seal]

CORPORATE SURETIES

[Name and Address]
State of incorporation: _____
Liability limit: \$ _____
[Signature(s)]
[Name(s) and title(s)]
[Corporate seal]
[This information must be provided for each cosurety]
Bond Premium: \$ _____

F. Appendix F—Performance Bond

[Insert, as applicable: "COMMERCIAL PREPARER OF SEWAGE SLUDGE" or "COMMERCIAL LAND APPLIER OF BIOSOLIDS"]

PERFORMANCE BOND

Date bond was executed: _____
Effective date: _____
Principal: [legal name and business address of affected person]
Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"]
State of incorporation: _____

Surety: [name(s) and business address(es)]
[agency interest number, site name, facility name, facility permit number, facility address, and closure amount(s) for each facility guaranteed by this bond]
Total penal sum of bond: \$ _____
Surety's bond number: _____

Know All Persons by These Presents, That we, the Principal and Surety hereto, are firmly bound to the Louisiana Department of Environmental Quality in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally; provided that, where Sureties are corporations acting as cosureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

WHEREAS, said Principal is required, under the Louisiana Environmental Quality Act, R.S. 30:2001 et seq., and specifically Section 2074(B)(4), to have a permit in order to own or operate the [insert type of permitted operation] identified above; and

WHEREAS, the Principal is required by law to provide financial assurance for closure, as a condition of the permit; and

WHEREAS, said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

THEREFORE, the conditions of this obligation are such that if the Principal shall faithfully perform closure, whenever required to do so, of the facility for which this bond guarantees closure, in accordance with the closure plan and other requirements of the permit as such plan and permit may be amended, pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended;

OR, if the Principal shall provide financial assurance as specified in *Louisiana Administrative Code* (LAC), Title 33, Part IX.7307.E and obtain written approval of the administrative authority of such assurance, within 90 days after the date of notice of cancellation is received by both the Principal and the administrative authority, then this obligation shall be null and void; otherwise it is to remain in full force and effect.

The surety shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described hereinabove.

Upon notification by the administrative authority that the Principal has been found in violation of the closure requirements of the LAC 33:IX.7305.C.3, or of its permit for the facility for which this bond guarantees performance of closure, the Surety shall either perform closure in accordance with the closure plan and other permit requirements, or place the closure amount guaranteed for the facility into the standby trust fund as directed by the administrative authority.

Upon notification by the administrative authority that the Principal has failed to provide alternate financial assurance, as specified in LAC 33:IX.7307.E.2.e.iii.(b), and obtain written approval of such assurance from the administrative authority during the 90 days following receipt by both the Principal and the administrative authority of a notice of cancellation of the bond, the Surety shall place funds in the amount guaranteed for the facility into the standby trust fund as directed by the administrative authority.

The Surety hereby waives notification of amendments to closure plans, permit, applicable laws, statutes, rules, and

regulations, and agrees that no such amendment shall in any way alleviate its obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety hereunder exceed the amount of the penal sum.

The Surety may cancel the bond by sending notice of cancellation by certified mail to the Principal and to the administrative authority. Cancellation shall not occur before 120 days have lapsed beginning on the date that both the Principal and the administrative authority received the notice of cancellation, as evidenced by the return receipts.

The Principal may terminate this bond by sending written notice to the Surety and to the administrative authority, provided, however, that no such notice shall become effective until the Surety receives written authorization for termination of the bond by the administrative authority.

The Principal and Surety hereby agree to adjust the penal sum of the bond yearly in accordance with LAC 33:IX.7307.E.2.d.vi and the conditions of the permit so that it guarantees a new closure amount, provided that the penal sum does not increase or decrease without the written permission of the administrative authority.

The Principal and Surety hereby agree that no portion of the penal sum may be expended without prior written approval of the administrative authority.

IN WITNESS WHEREOF, the Principal and the Surety have executed this PERFORMANCE BOND and have affixed their seals on the date set forth above.

Those persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety, that each Surety hereto is authorized to do business in the State of Louisiana, and that the wording of this surety bond is identical to the wording specified in LAC 33:IX.7395.Appendix F, effective on the date this bond was executed.

PRINCIPAL
[Signature(s)]
[Name(s)]
[Title(s)]
[Corporate seal]

CORPORATE SURETY
[Name and address]
State of incorporation: _____
Liability limit: \$ _____
[Signature(s)]
[Name(s) and title(s)]
[Corporate seal]
[For every cosurety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]
Bond premium: \$ _____

G Appendix G—Letter of Credit

[Insert, as applicable: "COMMERCIAL PREPARER OF SEWAGE SLUDGE" or "COMMERCIAL LAND APPLIER OF BIOSOLIDS"]

IRREVOCABLE LETTER OF CREDIT

Secretary
Louisiana Department of Environmental Quality
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

Attention: Office of Environmental Services

Dear Sir:

We hereby establish our Irrevocable Standby Letter of Credit No. _____ in favor of the Department of Environmental Quality of the State of Louisiana at the request and for the account of [affected person's name and address] for the closure fund for its [list agency interest number, site name, facility name, facility permit number] at [location], Louisiana, for any sum or sums up to the aggregate amount of U.S. dollars \$ _____ upon presentation of:

(i). A sight draft, bearing reference to the Letter of Credit No. _____ drawn by the administrative authority, together with;

(ii). A statement, signed by the administrative authority, declaring that the amount of the draft is payable into the standby trust fund pursuant to the Louisiana Environmental Quality Act, R.S. 30:2001 et seq.

The Letter of Credit is effective as of [date] and will expire on [date], but such expiration date will be automatically extended for a period of at least one year on the above expiration date [date] and on each successive expiration date thereafter, unless, at least 120 days before the then-current expiration date, we notify both the administrative authority and [name of affected person] by certified mail that we have decided not to extend this Letter of Credit beyond the then-current expiration date. In the event that we give such notification, any unused portion of this Letter of Credit shall be available upon presentation of your sight draft for 120 days after the date of receipt by both the Department of Environmental Quality and [name of affected person], as shown on the signed return receipts.

Whenever this Letter of Credit is drawn under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of [name of affected person] in accordance with the administrative authority's instructions.

Except to the extent otherwise expressly agreed to, the [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published and copyrighted by the International Chamber of Commerce," or "the Uniform Commercial Code"], shall apply to this Letter of Credit.

We certify that the wording of this Letter of Credit is identical to the wording specified in *Louisiana Administrative Code* (LAC), Title 33, Part IX.7395.Appendix G, effective on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution(s)]
[date]

H Appendix H—Certificate of Insurance

[Insert, as applicable: "COMMERCIAL PREPARER OF SEWAGE SLUDGE" or "COMMERCIAL LAND APPLIER OF BIOSOLIDS"]

CERTIFICATE OF INSURANCE FOR CLOSURE

Name and Address of Insurer: _____
(hereinafter called the "Insurer")
Name and Address of Insured: _____
(hereinafter called the "Insured")
(Note: Insured must be the affected person.)

Facilities covered: [list the agency interest number(s), site name(s), facility name(s), facility permit number(s), address(es), and amount(s) of insurance for closure] (These amounts for all facilities must total the face amount shown below.)

Face Amount: _____
Policy Number: _____
Effective Date: _____

The Insurer hereby certifies that it has issued to the Insured the policy of insurance identified above to provide financial assurance for closure for the facilities identified above. The

Insurer further warrants that such policy conforms in all respects to the requirements of LAC 33:IX.7307.D.1.a or E.2.g, as applicable, and as such regulations were constituted on the date shown immediately below. It is agreed that any provision of the policy inconsistent with such regulations is hereby amended to eliminate such inconsistency.

Whenever requested by the administrative authority, the Insurer agrees to furnish to the administrative authority a duplicate original of the policy listed above, including all endorsements thereon.

I hereby certify that the Insurer is admitted, authorized, or eligible to conduct insurance business in the State of Louisiana and that the wording of this certificate is identical to the wording specified in LAC 33:IX.7395.Appendix H, effective on the date shown immediately below.

[Authorized signature of Insurer]
[Name of person signing]
[Title of person signing]
Signature of witness or notary: _____
[Date]

I. Appendix I—Letter from the Chief Financial Officer

[Insert, as applicable: "COMMERCIAL PREPARER OF SEWAGE SLUDGE" or "COMMERCIAL LAND APPLIER OF BIOSOLIDS"]

**LETTER FROM THE CHIEF FINANCIAL OFFICER
(LIABILITY COVERAGE AND/OR CLOSURE)**

Secretary
Louisiana Department of Environmental Quality
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

Attention: Office of Environmental Services

Dear Sir:

I am the chief financial officer of [name and address of firm, which may be either the affected person or parent corporation of the affected person]. This letter is in support of this firm's use of the financial test to demonstrate financial responsibility for [insert "liability coverage" and/or "closure," as applicable] as specified in *Louisiana Administrative Code* (LAC), Title 33, Part IX, [insert "7307.D.1.c," "7307.E.2.h," or "7307.D.1.c and E.2.h"].

[Fill out the following four paragraphs regarding facilities and associated liability coverage, and closure cost estimates. If your firm does not have facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, list the agency interest number, site name, facility name, and facility permit number.]

(A). The firm identified above is the [insert "affected person" or "parent corporation of the affected person"], whether in the State of Louisiana or not, for which liability coverage is being demonstrated through the financial test specified in LAC 33:IX.7307.D.1.c. The amount of annual aggregate liability coverage covered by the test is shown for each facility:

(B). The firm identified above is the [insert "affected person" or "parent corporation of the affected person"], whether in the State of Louisiana or not, for which financial assurance for closure is demonstrated through a financial test similar to that specified in LAC 33:IX.7307.E.2.h or other forms of self-insurance. The current closure cost estimates covered by the test are shown for each facility:

(C). This firm guarantees through a corporate guarantee similar to that specified in [insert "LAC 33:IX.7307.D.1.d," "LAC 33:IX.7307.E.2.h.ix," or "LAC 33:IX.7307.D.1.d and E.2.h.ix"], [insert "liability coverage," and/or "closure,"] whether in the State of Louisiana or not, of which [insert the name of the affected person] are/is a subsidiary of this firm.

The amount of annual aggregate liability coverage covered by the guarantee for each facility and/or the current cost estimates for the closure so guaranteed is shown for each facility:

(D). This firm is the owner or operator of the following facilities, whether in the State of Louisiana or not, for which financial assurance for liability coverage and/or closure is not demonstrated either to the U.S. Environmental Protection Agency or to a state through a financial test or any other financial assurance mechanism similar to those specified in LAC 33:IX.7307.D and/or E. The current closure cost estimates not covered by such financial assurance are shown for each facility:

This firm [insert "is required" or "is not required"] to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on [month, day]. The figures for the following items marked with an asterisk are derived from this firm's independently-audited, year-end financial statements for the latest completed year, ended [date].

[Fill in Part A if you are using the financial test to demonstrate coverage only for the liability requirements.]		
PART A. LIABILITY COVERAGE FOR ACCIDENTAL OCCURRENCES		
[Fill in Alternative I if the criteria of LAC 33:IX.7307.E.2.h.i.(a) are used.]		
Alternative I		
1. Amount of annual aggregate liability coverage to be demonstrated	\$ _____	
*2. Current assets	\$ _____	
*3. Current liabilities	\$ _____	
*4. Tangible net worth	\$ _____	
*5. If less than 90 percent of assets are located in the U.S., give total U.S. assets	\$ _____	
	YES	NO
6. Is line 4 at least \$10 million?	_____	_____
7. Is line 4 at least 6 times line 1?	_____	_____
*8. Are at least 90 percent of assets located in the U.S.? If not, complete line 9.	_____	_____
9. Is line 4 at least 6 times line 1?	_____	_____
[Fill in Alternative II if the criteria of LAC 33:IX.7307.E.2.h.i.(b) are used.]		
Alternative II		
1. Amount of annual aggregate liability coverage to be demonstrated	\$ _____	
2. Current bond rating of most recent issuance of this firm and name of rating service	_____	
3. Date of issuance of bond	_____	
4. Date of maturity of bond	_____	
*5. Tangible net worth	\$ _____	
*6. Total assets in U.S. (required only if less than 90 percent of assets are located in the U.S.)	\$ _____	
	YES	NO
7. Is line 5 at least \$10 million?	_____	_____
8. Is line 5 at least 6 times line 1?	_____	_____
*9. Are at least 90 percent of assets located in the U.S.? If not, complete line 10.	_____	_____
10. Is line 6 at least 6 times line 1?	_____	_____

[Fill in Part B if you are using the financial test to demonstrate assurance only for closure.]		
PART B. CLOSURE		
[Fill in Alternative I if the criteria of LAC 33:IX.7307.E.2.h.i.(a) are used.]		
Alternative I		
1. Sum of current closure estimates (total all cost estimates shown above)	\$ _____	
*2. Tangible net worth	\$ _____	
*3. Net worth	\$ _____	
*4. Current Assets	\$ _____	
*5. Current liabilities	\$ _____	
*6. The sum of net income plus depreciation, depletion, and amortization	\$ _____	
*7. Total assets in U.S. (required only if less than 90 percent of firm's assets are located in the U.S.)	\$ _____	
	YES	NO
8. Is line 2 at least \$10 million?	_____	_____
9. Is line 2 at least 6 times line 1?	_____	_____
*10. Are at least 90 percent of the firm's assets located in the U.S.? If not, complete line 11.	_____	_____
11. Is line 7 at least 6 times line 1?	_____	_____
[Fill in Alternative II if the criteria of LAC 33:IX.7307.E.2.h.i.(b) are used.]		
Alternative II		
1. Sum of current closure cost estimates (total of all cost estimates shown above)	\$ _____	
2. Current bond rating of most recent issuance of this firm and name of rating service	_____	
3. Date of issuance of bond	_____	
4. Date of maturity of bond	_____	
*5. Tangible net worth (If any portion of the closure cost estimate is included in "total liabilities" on your firm's financial statement, you may add the amount of that portion to this line.)	\$ _____	
*6. Total assets in U.S. (required only if less than 90 percent of the firm's assets are located in the U.S.)	\$ _____	
	YES	NO
7. Is line 5 at least \$10 million?	_____	_____
8. Is line 5 at least 6 times line 1?	_____	_____
9. Are at least 90 percent of the firm's assets located in the U.S.? If not, complete line 10.	_____	_____
10. Is line 6 at least 6 times line 1?	_____	_____

[Fill in Part C if you are using the financial test to demonstrate assurance for liability coverage and/or closure.]		
PART C. LIABILITY COVERAGE AND/OR CLOSURE		
[Fill in Alternative I if the criteria of LAC 33:IX.7307.E.2.h.i.(a) are used.]		
Alternative I		
1. Sum of current closure cost estimates (total of all cost estimates listed above)	\$ _____	
2. Amount of annual aggregate liability coverage to be demonstrated	\$ _____	
3. Sum of lines 1 and 2	\$ _____	
*4. Total liabilities (If any portion of your closure cost estimates is included in your "total liabilities" in your firm's financial statements, you may deduct that portion from this line and add that amount to lines 5 and 6.)	\$ _____	
*5. Tangible net worth	\$ _____	
*6. Net worth	\$ _____	
*7. Current assets	\$ _____	
*8. Current liabilities	\$ _____	
*9. The sum of net income plus depreciation, depletion, and amortization	\$ _____	
*10. Total assets in the U.S. (required only if less than 90 percent of assets are located in the U.S.)	\$ _____	
	YES	NO
11. Is line 5 at least \$10 million?	_____	_____
12. Is line 5 at least 6 times line 3?	_____	_____
*13. Are at least 90 percent of assets located in the U.S.? If not, complete line 14.	_____	_____
14. Is line 10 at least 6 times line 3?	_____	_____
[Fill in Alternative II if the criteria of LAC 33:IX.7307.E.2.h.i.(b) are used.]		
Alternative II		
1. Sum of current closure cost estimates (total of all cost estimates listed above)	\$ _____	
2. Amount of annual aggregate liability coverage to be demonstrated	\$ _____	
3. Sum of lines 1 and 2	\$ _____	
4. Current bond rating of most recent issuance of this firm and name of rating service	_____	
5. Date of issuance of bond	_____	
6. Date of maturity of bond	_____	
*7. Tangible net worth (If any portion of the closure cost estimates is included in the "total liabilities" in your firm's financial statements, you may add that portion to this line.)	\$ _____	
*8. Total assets in U.S. (required only if less than 90 percent of assets are located in the U.S.)	\$ _____	
	YES	NO
9. Is line 7 at least \$10 million?	_____	_____
10. Is line 7 at least 6 times line 3?	_____	_____
*11. Are at least 90 percent of assets located in the U.S.? If not, complete line 12.	_____	_____
12. Is line 8 at least 6 times line 3?	_____	_____

[The following is to be completed by all firms providing the financial test]

I hereby certify that the wording of this letter is identical to the wording specified in LAC 33:IX.7395.Appendix I.

[Signature of chief financial officer for the firm]

[Typed name of chief financial officer]

[Title]

[Date]

J. Appendix J—Corporate Guarantee

[Insert, as applicable: "COMMERCIAL PREPARER OF SEWAGE SLUDGE" or "COMMERCIAL LAND APPLIER OF BIOSOLIDS"]

CORPORATE GUARANTEE FOR LIABILITY COVERAGE AND/OR CLOSURE

Guarantee made this [date] by [name of guaranteeing entity], a business corporation organized under the laws of the State of [insert name of state], hereinafter referred to as guarantor, to the Louisiana Department of Environmental Quality, obligee, on behalf of our subsidiary [insert the name of the affected person] of [business address].

Recitals

(A). The guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in *Louisiana Administrative Code* (LAC), Title 33, Part IX.7307.D.1.d and/or E.2.h.ix.

(B). [Subsidiary] is the affected person covered by this guarantee: [List the agency interest number, site name, facility name, and facility permit number. Indicate for each facility whether guarantee is for liability coverage and/or closure and the amount of annual aggregate liability coverage and/or closure costs covered by the guarantee.]

[Fill in Paragraphs (C) and (D) below if the guarantee is for closure.]

(C). "Closure plans" as used below refers to the plans maintained as required by LAC 33:IX.7305.C.3, for the closure of the facility identified in Paragraph (B) above.

(D). For value received from the affected person, guarantor guarantees to the Louisiana Department of Environmental Quality that in the event that the affected person fails to perform closure of the above facility in accordance with the closure plan and other permit requirements whenever required to do so, the guarantor shall do so or shall establish a trust fund as specified in LAC 33:IX.7307.E.2.c, as applicable, in the name of the affected person in the amount of the current closure estimates as specified in LAC 33:IX.7307.E.2.

[Fill in Paragraph (E) below if the guarantee is for liability coverage.]

(E). For value received from the affected person, guarantor guarantees to any and all third parties who have sustained or may sustain bodily injury or property damage caused by sudden and accidental occurrences arising from operations of the facility covered by this guarantee that in the event that the affected person fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by sudden and accidental occurrences arising from the operation of the above-named facility, or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor will satisfy such judgment(s), award(s), or settlement agreement(s) up to the coverage limits identified above.

(F). The guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, the guarantor shall send within 90 days, by certified mail, notice to the administrative authority, and to the affected person, that he intends to provide alternate financial assurance as specified in [insert "LAC 33:IX.7307.D" and/or "LAC 33:IX.7307.E"], as applicable, in the name of the affected person. Within 120 days after the end of such fiscal year, the guarantor shall establish such financial assurance unless the affected person has done so.

(G). The guarantor agrees to notify the administrative authority, by certified mail, of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming guarantor as debtor, within 10 days after commencement of the proceeding.

(H). The guarantor agrees that within 30 days after being notified by the administrative authority of a determination that the guarantor no longer meets the financial test criteria or that

he is disallowed from continuing as a guarantor of [insert "liability coverage" and/or "closure"] he shall establish alternate financial assurance as specified in [insert "LAC 33:IX.7307.D" and/or "LAC 33:IX.7307.E"], as applicable, in the name of the affected person unless the affected person has done so.

(I). The guarantor agrees to remain bound under this guarantee notwithstanding any or all of the following: [if the guarantee is for closure, insert "amendment or modification of the closure plan, the extension or reduction of the time of performance of closure, or"] any other modification or alteration of an obligation of the affected person pursuant to LAC 33:IX.7305.C.3.

(J). The guarantor agrees to remain bound under this guarantee for as long as the affected person must comply with the applicable financial assurance requirements of [insert "LAC 33:IX.7307.D" and/or "LAC 33:IX.7307.E"] for the above-listed facility, except that the guarantor may cancel this guarantee by sending notice by certified mail, to the administrative authority and to the affected person, such cancellation to become effective no earlier than 90 days after receipt of such notice by both the administrative authority and the affected person, as evidenced by the return receipts.

(K). The guarantor agrees that if the affected person fails to provide alternative financial assurance as specified in [insert "LAC 33:IX.7307.D" and/or "LAC 33:IX.7307.E"], as applicable, and obtain written approval of such assurance from the administrative authority within 60 days after a notice of cancellation by the guarantor is received by the administrative authority from the guarantor, the guarantor shall provide such alternate financial assurance in the name of the affected person.

(L). The guarantor expressly waives notice of acceptance of this guarantee by the administrative authority or by the affected person. Guarantor expressly waives notice of amendments or modifications of the closure plan and of amendments or modifications of the facility permit(s).

I hereby certify that the wording of this guarantee is identical to the wording specified in LAC 33:IX.7395.Appendix J, effective on the date first above written.

Effective date: _____

[Name of Guarantor]

[Authorized signature for guarantor]

[Typed name and title of person signing]

Thus sworn and signed before me this [date].

Notary Public

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2001 et seq., and in particular Section 2074(B)(1)(c), (B)(3), and (B)(4).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:818 (April 2002), repromulgated LR 30:233 (February 2004), amended by the Office of Environmental Assessment, LR 30:2028 (September 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2519 (October 2005), LR 33:2409 (November 2007), LR 35:941 (May 2009).

§7397. Procedure to Determine the Annual Whole Biosolids Application Rate (AWBAR)— Appendix K

A. LAC 33:IX.7303.E.1.d.ii requires that the product of the concentration for each pollutant listed in Table 4 of LAC 33:IX.7303.E in biosolids sold or given away in a bag or other container for application to the land and the annual

whole biosolids application rate (AWBAR) not cause the annual pollutant loading rate for the pollutant in Table 4 of LAC 33:IX.7303.E to be exceeded. This Appendix contains the procedure used to determine the AWBAR for a sewage sludge that does not cause the annual pollutant loading rates in Table 4 of LAC 33:IX.7303.E to be exceeded.

B. The relationship between the annual pollutant loading rate (APLR) for a pollutant and the AWBAR is shown in Equation (1).

Equation (1)

$$APLR = C \times AWBAR \times 0.001$$

where:

<i>APLR</i>	= annual pollutant loading rate in kilograms per hectare per 365-day period
<i>C</i>	= pollutant concentration in milligrams per kilogram of total solids (dry weight basis)
<i>AWBAR</i>	= annual whole biosolids application rate in metric tons per hectare per 365-day period (dry weight basis)
<i>0.001</i>	= a conversion factor

C. To determine the AWBAR, Equation (1) is rearranged into Equation (2).

Equation (2)

$$AWBAR = \frac{APLR}{C \times 0.001}$$

D. The procedure used to determine the AWBAR is presented below.

1. Analyze a sample of the biosolids to determine the concentration for each of the pollutants listed in Table 4 of LAC 33:IX.7303.E in the biosolids.

2. Using the pollutant concentrations from Step 1 and the APLRs from Table 4 of LAC 33:IX.7303.E, calculate an AWBAR for each pollutant using Equation (2) above.

3. The AWBAR for the biosolids is the lowest AWBAR calculated in Step 2.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2001 et seq., and in particular Section 2074(B)(1)(c), (B)(3), and (B)(4).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:817 (April 2002), repromulgated LR 30:233 (February 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2417 (November 2007).

§7399. Pathogen Treatment Processes—Appendix L

A. Processes to Significantly Reduce Pathogens (PSRP)

1. **Aerobic Digestion.** Sewage sludge is agitated with air or oxygen to maintain aerobic conditions for a specific

mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature shall be between 40 days at 20°C and 60 days at 15°C.

2. **Air Drying.** Sewage sludge is dried on sand beds or on paved or unpaved basins. The sewage sludge dries for a minimum of three months. During two of the three months, the ambient average daily temperature is above 0°C.

3. **Anaerobic Digestion.** Sewage sludge is treated in the absence of air for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature shall be between 15 days at 35° to 55°C and 60 days at 20°C.

4. **Composting.** Using either the within-vessel, static aerated pile, or windrow composting methods, the temperature of the sewage sludge is raised to 40°C or higher and remains at 40°C or higher for five days. For four hours during the five days, the temperature in the compost pile exceeds 55°C.

5. **Lime Stabilization.** Sufficient lime is added to the sewage sludge to raise the pH of the sewage sludge to 12 after two hours of contact.

B. Processes to Further Reduce Pathogens (PFRP)

1. **Composting.** Using either the within-vessel composting method or the static aerated pile composting method, the temperature of the sewage sludge is maintained at 55°C or higher for three days. Using the windrow composting method, the temperature of the sewage sludge is maintained at 55°C or higher for 15 days or longer. During the period when the compost is maintained at 55°C or higher, there shall be a minimum of five turnings of the windrow.

2. **Heat Drying.** Sewage sludge is dried by direct or indirect contact with hot gases to reduce the moisture content of the sewage sludge to 10 percent or lower. Either the temperature of the sewage sludge particles exceeds 80°C or the wet bulb temperature of the gas in contact with the sewage sludge as the sewage sludge leaves the dryer exceeds 80°C.

3. **Heat Treatment.** Liquid sewage sludge is heated to a temperature of 180°C or higher for 30 minutes.

4. **Thermophilic Aerobic Digestion.** Liquid sewage sludge is agitated with air or oxygen to maintain aerobic conditions and the mean cell residence time of the sewage sludge is 10 days at 55° to 60°C.

5. **Beta Ray Irradiation.** Sewage sludge is irradiated with beta rays from an accelerator at dosages of at least 1.0 megarad at room temperature (approximately 20°C).

6. **Gamma Ray Irradiation.** Sewage sludge is irradiated with gamma rays from certain isotopes, such as ⁶⁰Cobalt and ¹³⁷Cesium, at dosages of at least 1.0 megarad at room temperature (approximately 20°C).

7. **Pasteurization.** The temperature of the sewage sludge is maintained at 70°C or higher for 30 minutes or longer.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2001 et seq., and in particular Section 2074(B)(1)(c), (B)(3), and (B)(4).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment,

Environmental Planning Division, LR 28:817 (April 2002), repromulgated LR 30:233 (February 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2417 (November 2007).